



State Water Resources Control Board Division of Drinking Water

March 17, 2020

System No. 3610109

Chris Cummings, General Manager Sheep Creek Water Company P.O. Box 291820 Phelan, CA 92329 sheepcreek@verizon.net

COMPLIANCE ORDER NO.05_13_18R_002A1 SOURCE CAPACITY VIOLATION

Enclosed is Compliance Order No. 05_13_18R_002A1 (hereinafter "Order"), issued to the Sheep Creek Water Company public water system (hereinafter "System"), public water system. Please note there are legally enforceable deadlines associated with this Order.

The System will be billed at the State Water Resources Control Board's (hereinafter "State Water Board"), hourly rate for the time spent on issuing this Order. California Health and Safety Code (hereinafter "CHSC"), Section 116577, provides that a public water system must reimburse the State Water Board for actual costs incurred by the State Water Board for specified enforcement actions, including but not limited to, preparing, issuing and monitoring compliance with an order. At this time, the State Water Board has spent approximately 2 hour(s) on enforcement activities associated with this violation.

The System 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 System for the current fiscal year.

Any person who is aggrieved by a citation, order or decision issued under authority delegated to an officer or employee of the state board under Article 8 (commencing with CHSC, Section 116625) or Article 9 (commencing with CHSC, Section 116650), of the Safe Drinking Water Act (CHSC, Division 104, Part 12, Chapter 4), may file a petition with the State Water Board for reconsideration of the citation, order or decision.

E. JOAQUIN ESQUIVEL, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

Petitions must be received by the State Water Board within 30 days of the issuance of the citation, order or decision by the officer or employee of the state board. The date of issuance is the date when the Division of Drinking Water mails a copy of the citation, order or decision. 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:

http://www.waterboards.ca.gov/drinking water/programs/petitions/index.shtml

If you have any questions regarding this matter, please contact Hector Cazares of my staff at (909) 383-4312 or me at (909) 383-4328.

Sincerely,

Sean F. McCarthy, P.E.

Chief, South Coast Section

Sent. Mchife

Southern California Field Operations Branch

Enclosures:

Certified Mail No. 7017 0660 0001 1704 8464

cc: David Alaniz, SB County EHS, via email at David.Alaniz@dph.sbcounty.gov Gabriela Garcia, SB County EHS via email at Gabriela.Garcia@dph.sbcounty.gov

1	Compliance Order No. 05_13_18R_002A1
2	
3	STATE OF CALIFORNIA
4	STATE WATER RESOURCES CONTROL BOARD
5	DIVISION OF DRINKING WATER
6	
7	Name of Public Water System: Sheep Creek Water Company
8	Water System No: 3610109
9	X.
10	Attention: Chris Cummings, General Manager
11	P.O. Box 291820
12	Phelan, CA 92329
13	
14	Issued: March 17, 2020
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16	AMENDED COMPLIANCE ORDER FOR VIOLATION OF CALIFORNIA HEALTH
17	AND SAFETY CODE SECTION 116555(a)(3) AND
18	CALIFORNIA CODE OF REGULATIONS, TITLE 22, SECTION 64554
19	
20	SOURCE CAPACITY VIOLATION
21	2018
22	
23	The California Health and Safety Code (hereinafter "CHSC"), Section 116655 authorizes
24	the State Water Resources Control Board (hereinafter "State Water Board"), to issue a
25	compliance order to a public water system when the State Water Board determines that
26	the public water system has violated or is violating the California Safe Drinking Water
27	Act (hereinafter "California SDWA"), (CHSC, Division 104, Part 12, Chapter 4,

commencing with Section 116270), or any regulation, standard, permit, or order issued or adopted thereunder.

The State Water Board, acting by and through its Division of Drinking Water (hereinafter "Division"), and the Deputy Director for the Division, hereby issues Compliance Order No. 05_13_18R_002A1 (hereinafter "Order") pursuant to Section 116655 of the CHSC to the Sheep Creek Water Company (hereinafter "System"), for violation of CHSC, Section 116555(a)(3), requiring a reliable and adequate supply of pure, wholesome, healthful, and potable water, and California Code of Regulations (hereinafter "CCR"), Title 22, Section 64554, setting source capacity requirements.

STATEMENT OF FACTS

The System is classified as a community public water system with a population of 3,354 serving 1,183 connections. The System operates under Domestic Water Supply Permit No. 78-007 issued by the State Water Board on February 9, 1978.

The System relies on six (6) groundwater wells: Wells 2A, 3A, 4A, 5, 8, 11 and one (1) tunnel source which is also classified as groundwater.

As a result of Compliance Order No. 05-13-18R-002 the State Water Board imposed a service connection moratorium which directed the System to not make any additional service connections to its water system, including any such service connections for which a "will serve" letter was issued at any time by the System, but for which a building permit was not issued prior to the date of Compliance Order No. 05-13-18R-002.

On November 28, 2018 the State Water Board permitted Well 11 as an approved potable source for the System. The well is equipped to supply up to 251 gallons per minute (gpm) into the distribution system per the initial pump test completed on July 16, 2018.

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On January 14, 2019 the System completed a feasibility report addressing the water source capacity issue which included an assessment of consolidation with a nearby public water system. The feasibility report has been attached to this Order as Appendix 1. The feasibility study discussed cost estimates, including the operation and maintenance (O&M) costs, and the potential environmental impacts of each of the options considered. The report identified and assessed two alternatives; either maintain the System as an independent water purveyor by drilling and operating additional water supply wells to meet MDD requirements or have the System consolidate with Phelan Pinon Hills Community Services District. In accordance with the feasibility study the cost for consolidation would amount to a net present value of \$3.4 million dollars including operation and maintenance costs in comparison to the net present value of \$6.5 million dollars including operation and maintenance costs to maintain the System as a public water purveyor and drill additional sources. Based on the cost analysis of the feasibility report, the consolidation with Phelan Pinon Hills Community Services District would be the more feasible alternative. However, based on discussions with the System's general manager and the System's board of directors, the preferred alternative was identified in the report as maintaining the System as an independent water purveyor by drilling and operating additional water supply wells to meet MDD requirements.

On August 17, 2019 the System held a special meeting for System shareholders to present the alternatives for compliance. Based on the System's voting procedure the shareholders gave authority to proceed with drilling the additional sources required to meet the System's source capacity requirements rather than consolidate with Phelan Pinon Hills Community Services District. This information was provided by the System to the Division from a letter submitted by the System on August 28, 2019. The letter has been attached to this Order as Appendix 2.

On August 28, 2019 the Division received a corrective action plan which stated that with the approval of the System's shareholders, the System's board of directors is prepared to proceed with the development of additional water source facilities to bring the System into compliance with source capacity requirements. Based on the timeline included in the corrective action plan the System will be in compliance with source capacity requirements by no later than October 1, 2023. The corrective action plan was approved by the Division on January 3, 2020 and has been attached to this Order as Appendix 2. As part of the corrective action plan's approval the Division has addressed financial concerns on the feasibility of this project. Within the approval the Division has stated that the System should assess all the financial risks that could result from this project and has advised the System to be prepared in budgeting the project without causing financial hardship on the System or its shareholders.

CHSC, Section 116555(a)(3) requires all public water systems to provide a reliable and adequate supply of pure, wholesome, healthful, and potable water and CCR, Title 22, Section 64554(a) requires that public water systems shall at all times have the capacity to meet the System's maximum day demand (MDD) as established by Section 64554 subsection (b).

DETERMINATION

Based on the above Statement of Facts, the State Water Board has determined that without additional source capacity, the System may not be able to provide an adequate and reliable supply of water to its customers and has failed to comply with requirements from CHSC, Section 116555(a)(3) and CCR, Title 22, Section 64554. The Division has the authority under Sections 116655 (a)(2) and 116655 (b)(4) of the CHSC to take steps necessary to prevent increasing water demands for the System until such time that an adequate and proven source capacity is provided.

DIRECTIVES

To ensure that the water supplied by the System is at all times reliable and adequate, the System is hereby directed to take the following actions:

- 1. Upon receipt of this Order, the Division continues to impose a service connection moratorium on the System and directs the System to not make any additional service connections to its water system, including any such service connections for which a "will serve" letter was issued at any time by the System, but for which a building permit was not issued prior to the date of Compliance Order No. 05-13-18R-002 being issued. As used in this Order, "will serve" letter means any form of notice, representation or agreement that the System will supply water to a property, parcel or structure
- 2. Per Section 116530 of the California Health and Safety Code, the Division requires that information related to the System's financial capacity be submitted no later than August 31, 2020. For the purpose of this directive, the financial information must include, but is not limited to the following:
 - a. An overall evaluation of the financial health of the system by a Certified Public Accountant or appropriately qualified financial officer. The evaluation must include and take into consideration audited financial statements from the past 5 years, monthly revenue and expenses from the past 5 years, management and status of outstanding debt and impending debt that will be accrued as a result of the requirements outlined in this Order and from any other planned water system expenses, documentation demonstrating how funding for the requirements outlined in this Order will be secured and financed, information on the expected increase in operational expenses due to the requirements outlined in this Order, management and status of the System's reserve funds, and information on

the System's rate structure and any proposed rate increases that are anticipated. The evaluation must include a concluding statement on the System's overall current and anticipated financial health.

- b. An asset management plan (AMP) must be completed by the System. The AMP must include an inventory of the System's infrastructure components, a description of the components' condition, age, service history, and useful life, criteria to determine when to repair, rehabilitate or replace assets, a prioritization of critical assets, long term funding strategies, and a timeline delineating the schedule for the System's asset management plan.
- c. A summary of operational costs associated with operation of Well 11. The summary must consider average operational costs and usage since the issuance of the Division's permit for Well 11 on November 28, 2018.
- d. The System must complete the Financial Assessment Questionnaire for Disadvantaged Medium/Large Community Water Systems included in Appendix 3 of this Order. The questionnaire provides several resources and guidance documents that are available to assist the System in completing items a & b of this directive.
- As stated in Directive No. 8 of Compliance Order No. 05-13-18R-002 the System
 must perform the State Water Board approved Corrective Action Plan, and each
 and every element of said plan, according to the time schedule set forth therein.
- 4. In accordance with CCR, Title 22, Section 64554(a), a public water system must at all times have adequate source capacity to meet the highest 10-year MDD, which for the System would be 1,970,000 gallons per day recorded from July 2014. Using the System's most conservative production yield records from July 2018, the System only produced a combined source flow of 720,000 gallons per day. Since the System's lowest production yield in July 2018, Well 11 was installed, adding an additional 360,000 gallons per day in source capacity.

Therefore, the System must construct and submit permit application(s) for additional water supply sources until an additional 890,000 gallons per day of production is achieved, which equates to the difference between the System's 10-year MDD and its lowest record of production. The System shall achieve compliance with all source capacity requirements as described in CCR, Title 22, Section 64554 no later than **December 1, 2023.** A source capacity evaluation has been included in Appendix 4 of this Order.

- 5. Per the State Water Board approved Corrective Action Plan, the System shall have Well No. 12 constructed and equipped for operation into the distribution system no later than **June 1, 2022**.
- Per the State Water Board approved Corrective Action Plan, the System shall have Well No. 13 constructed and equipped for operation into the distribution system no later than November 1, 2022.
- 7. Per the State Water Board approved Corrective Action Plan, if deemed necessary to comply with source capacity demand requirements as described in Directive 3 of this Order, the System shall have Well No. 14 constructed and equipped for operation into the distribution system by no later than **June 1, 2023**.
- 8. Per the State Water Board approved Corrective Action Plan, if deemed necessary to comply with source capacity demand requirements as described in Directive 3 of this Order, the System shall have Well No. 15 constructed and equipped for operation into the distribution system by no later than **November 1, 2023.**
- 9. The System must complete and submit to the Division pump tests for all sources demonstrating compliance with the source capacity requirements described in Directive 3 of this Order no later than December 1, 2023. Pump tests shall be

Ĩ	completed in accordance with the procedures stated under CCR, Title 22, Section
2	64554(f).
3	
4	10.On or before April 10, 2020 and every three months thereafter, submit a report
5	to the State Water Board in the form provided as Appendix 5 showing actions
6	taken during the previous quarter (calendar three months) to comply with the
7 8	Corrective Action Plan.
9	11.On or before April 10, 2020 and every month thereafter, submit a report to the
10	State Water Board summarizing source production and consumption data for the
11	previous month.
12	
13	12.On or before April 17, 2020 complete and return to the State Water Board the
14	"Notification of Receipt" form attached to this Order as Appendix 6. Completion
15	of this form confirms that the System has received this Order and understands
16	that it contains legally enforceable directives with due dates.
17	
18	All submittals required by this Order, with exception of analytical results, must be
19	electronically submitted to the State Water Board at the following address. The subject
20	line for all electronic submittals corresponding to this Order must include the following
21	information: Water System name and number, compliance order number and title of the
22	document being submitted.
23	
24	Eric J. Zúñiga, District Engineer
25	Dwpdist13@waterboards.ca.gov
26	

The State Water Board reserves the right to make modifications to this Order as it may 1 deem necessary to protect public health and safety. Such modifications may be issued 2 as amendments to this Order and shall be effective upon issuance. 3 4 Nothing in this Order relieves the System of its obligation to meet the requirements of 5 the California SDWA (CHSC, Division 104, Part 12, Chapter 4, commencing with Section 6 116270), or any regulation, standard, permit or order issued or adopted thereunder. 7 8 PARTIES BOUND 9 This Order shall apply to and be binding upon the System, its owners, shareholders, 10 officers, directors, agents, employees, contractors, successors, and assignees. 11 12 SEVERABILITY 13 The directives of this Order are severable, and the System shall comply with each and 14 every provision thereof notwithstanding the effectiveness of any provision. 15 16 17

FURTHER ENFORCEMENT ACTION

The California SDWA authorizes the State Water Board to issue a citation or order 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 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, or to petition the superior court to take various measures against a public water system that has failed to comply with an order of the State Water Board, including issuance of an injunction to enforce a compliance plan, enjoining further service connections, or any other relief that may be required to ensure compliance with the SDWA and applicable regulations. The State Water Board does not waive any further enforcement action by issuance of this Order.

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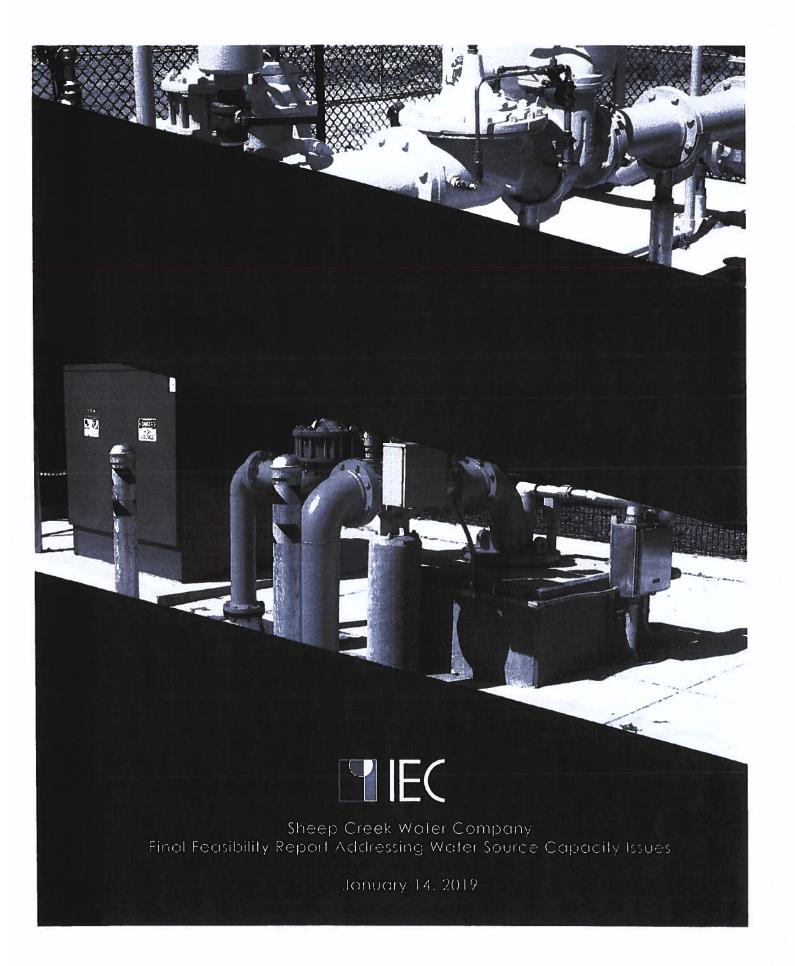
Chief, South Coast Section

Southern California Field Operations Branch

March 17, 2020

1	Appendices [7]:
2 3 4 5 6 7 8 9 10	 Feasibility Report for Addressing Water Source Capacity Issues State Water Board Approved Corrective Action Plan Financial Assessment Questionnaire for Disadvantaged Medium/Large Community Water Systems Source Capacity Evaluation Quarterly Progress Report Notification of Receipt Form Compliance Order No. 05_13_18R_002
12	Certified Mail No. 7017 0660 0001 1704 8464

Feasibility Report for Adressing Source Capacity Issues IEC



Prepared for:

Sheep Creek Water Company 4200 Sunnyslope Rd Phelan, CA 92371

January 14, 2019

Prepared by:
Infrastructure Engineering Corporation
1401 Commercial Way, Suite 100
Bakersfield, CA 93309



Dolores Salgado, P.E. Project Manager



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EXHIBITS

1.0 Introduction

The Sheep Creek Water Company (SCWC) is a private water company that owns the water system recognized as the Sheep Creek Water Company Water System (Water System No. CA3610109) by the State Water Resources Control Board (SWRCB), Division of Drinking Water (DDW). The water system is classified as a Community Water System and supplies water for domestic purposes to unincorporated portions of San Bernardino County in Phelan, CA. DDW regulates the water system under Domestic Water Supply Permit No.78-007 as issued on February 9, 1978. The Permit was recently amended to include a new supply source Well 11, which is located within the adjudicated Upper Mojave River Valley Basin (Basin No. 6-042).

Figure 1 shows SCWC's service area and an overview of their water system. The service area is approximately 7,000 acres. The SCWC relies on source of supply from five (5) wells and a water tunnel located within the El Mirage Basin (Basin No. 6-043) in the Swarthout Canyon in the San Gabriel Mountains.

2.0 Description of Problem

In 2015 the State of California issued a 25% mandatory reduction in water usage and required water purveyors to notify users and adopt policies to enforce the mandate. SCWC controls water usage by reducing or increasing the amount of water allotted per share, which prior to 2015 the allotment was 1,350 cubic feet per share. Then to discourage users from exceeding their allotted amount SCWC charges an overage fee, the standard fee was \$2.50 per 100 cubic feet. Effective May 1, 2015 SCWC reduced the water allotment from 1,350 cubic feet (cf) to 1,000 cf.

Due to the continued drought in California and the decline in SCWC's water production, on August 30, 2018 the SCWC received a Compliance Order (No. 05-13-18R-002) Source Capacity Violation from the State Water Resources Control Board, Division of Drinking Water (DDW) plus an imposed service connection moratorium, which became effective immediately. DDW cited the violation of California Code of Regulations (CCR) Title 22, section 64554(a), which states that a public water system must at all times have adequate source capacity to meet the system's highest maximum day demand (MDD); DDW cited a MDD of 2.09 MGD. DDW stated that SCWC's total source capacity as of August 2018 was 0.72 MG, which renders a MDD deficiency of 1.37 MG.

The board continues to monitor the drought conditions and the declining water supply. **Table 2.1** shows the progression of action taken by the board to reduce water allotments and increase overage fees. Today, all 8,000 shareholders adjusted to an allotment of 750 cf for their first share, 150 cf for their remaining shares and overage fees of \$6.32 per 100 cf. SCWC expects the current allotment and overage fees to remain in effect throughout 2019. The Board's Action Plan is included in **Appendix D**.



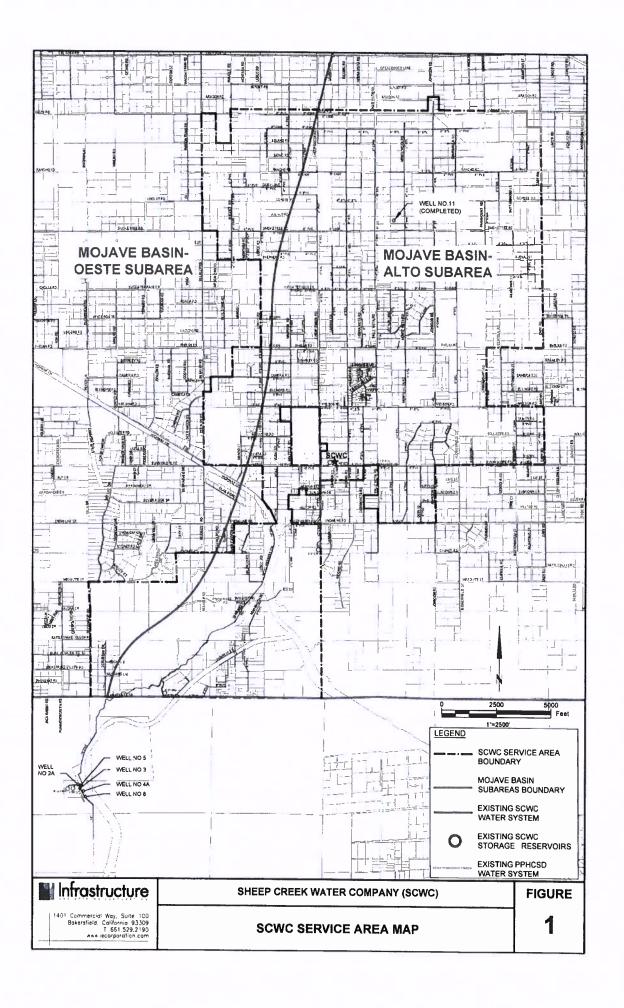
Table 2.1 Reduction of Water Allotments and Increased Overage Fees

Adopted Water Allotment	Source	Date implemented	
Monthly Base Rate at \$55	\\/*\=\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		
All Shares 1,000 cf at \$0.50 per 100 cf	Wrightwood Well Field	May 1, 2015	
Overages \$2.50 per 100 cf			
Monthly Base Rate at \$55			
First Share 1,000 cf at \$0.50 per 100 cf	Wrightwood Well Field	October 20, 2016	
Other Shares 500 cf at \$0.50 per 100 cf			
Overages \$3.50 per 100 cf			
Monthly Base Rate at \$55			
First Share 1,000 cf at \$0.50 per 100 cf	Wrightwood Well Field	May 22, 2017	
Other Shares 350 cf at \$0.50 per 100 cf		,,	
Overages \$3.85 per 100 cf			
Monthly Base Rate at \$55			
First Share 1,000 cf at \$0.50 per 100 cf	Wrightwood Well Field	May 19, 2018	
Other Shares 350 cf at \$0.50 per 100 cf			
Overages \$4.25 per 100 cf			
Monthly Base Rate at \$55	7/		
First Share 750 cf at \$0.50 per 100 cf	Wrightwood Well Field	July 20, 2018	
Other Shares 150 cf at \$0.50 per 100 cf		, = 1, = 12	
Overages \$7.40 per 100 cf			
Monthly Base Rate at \$55	-		
Tier 1: First Share 750 cf at \$0.50 per 100 cf	Tier 1 Wrightwood Well Field		
Other Shares 150 cf at \$0.50 per 100 cf	Tier 2 Well No. 11	September 20, 2018	
Tier 2: Add'l Shares 150 cf at \$3.46 per 100 cf	Tier 3 Overages		
Tier 3: Overages \$6.32 per 100 cf			

In 2016, SCWC began taking steps to resolve the source capacity issue by initiating the installation of Well No. 11. Completing the well took about 24 months and is expected to be online by the end of 2018. As of August 31, 2018, SCWC transferred four (4) connections serving the Snowline Joint Unified School District to Phelan Piñon Hills Community Services District (PPHCSD) at the school district's request. As of October 1, 2018, SCWC has 1,387 active and non-active metered connections. **Table 2.2** lists all existing metered connections by user type.

Table 2.2 Existing Metered Connections

		Meter Sizes					
User Type	Connections	1" Meter	2" Meter	4" Meter			
Commercial	101	76	25	0			
Multi-Family	13	9	4	0			
Schools	17	7	9	1			
Churches	14	13	1	0			
Landscape	4	4	0	0			
Residential	1,238	1,235	3	0			
Total	1,387	1,344	42	1			



Currently, the California Rural Water Association (CRWA) is applying for additional Proposition 1 funding on behalf of SCWC to provide short and long-term solutions to their water system deficiencies. Based on a recent income survey conducted by the California Rural Water Association, the SCWC service area is defined as a Disadvantaged Community (DAC). Based on the meeting held with DDW on January 7, 2019, SCWC understands that the State will make the final determination on the selected alternative shall funding from the Division of Financial Assistance be awarded to this project

This feasibility report evaluates two long-term solutions that will address their source capacity issue and bring SCWC's water system back into compliance.

3.0 Existing Water Supply Sources

SCWC sole source of water supply are via pre-1914 water rights. Their five wells and water supply tunnel are located off the Angeles Crest Hwy (SR-2) within the El Mirage Valley Basin. SCWC recently added a sixth well (Well No. 11), which is located near the intersection of Walnut Road and Monte Vista Road. Well No. 11 lies within the Alto Subarea of the adjudicated Mojave Basin Area. The Mojave Basin Area is regulated by the Mojave Water Agency (MWA), the courtappointed Watermaster since 1933.

As a party to the judgment, but with zero allocation, SCWC will need to either lease rights, purchase rights, or pay for water produced by Well No. 11 and any future wells in the Alto Subarea, minus any water that SCWC imports into the Mojave Basin.

Table 3.1 Existing SCWC Water Rights

Basin	Type of Water Right	Annual (AFY)	SCWC Exist Wells	Est. Cost for Water 2019	
El Mirage Basin	Pre-1914 Water Right	3,000	Well Nos. 2A, 3A, 4A, 5, 8 Tunnel	\$0	
Mojave Basin Area	Pumping Right	0	Well No. 11	\$639/ac-ft	
Antolono Pacin Aroa	Pumping Right	0	Well No. 10	To be determined in 2019	
Antelope Basin Area	Storage Agreements /Water Banking	0	vveii No. 10	N/A	

4.0 Water Supply and Demand Analysis

The objective of this water supply-demand evaluation is to determine if SCWC will be able to meet customer demand with its existing and potential supply sources while adhering to regulatory requirements. The general approach of the assessment involves the following steps:

- Review and summarize available studies related to the SCWC's water supplies in order to evaluate the risks associated with SCWC's water supply portfolio. Table 4.1 includes documents reviewed listed by source agencies.
- Evaluate the sources of water available to SCWC in order to determine the most
 efficient water supply strategy as the need becomes more defined and opportunities to
 increase production arise.

In addition, IEC has analyzed SCWC's consumption, production, and groundwater level data between years 2008 and 2018⁽¹⁾ to evaluate several supply and demand scenarios. In developing the scenarios, the following factors were considered:

- Water Supply Portfolio: Existing, Near-Term (2018-2019), and Long-Term (2020-2024) supply source
- Demand Trends: Regulatory requirements⁽²⁾, consumption trends in the system from factors like drought conditions, customer conservation initiatives, demand reduction opportunities, and service area reduction.
- Reliability: Reducing risk of disruption of supply delivery to meet regulatory requirements by adding additional wells.

A detailed discussion of scenarios considered and assumptions is presented in the remainder of this section.

² Per California Code and Regulations (CCR) 64558 (2), the system must be able to meet the 10-year Max Day Demand at all times.



¹ Per California Department of Water Resources, the recent drought event occurred between 2012 and 2016

Table 4.1 – List of Documents Reviewed

Document Title	Source		
Compliance Order 05-13-18R-002 Source Capacity Violation for Sheep Creek Water Company (3610109), August 30 th , 2018	Division of Drinking Water		
Consumer Confidence Report, 2016	Sheep Creek Water Company website		
SWRCB Feasibility Study Requirements, September 12 th , 2018	Sheep Creek Water Company		
Sheep Creek Water Company Consolidation Evaluation, May 2018	California Rural Water Association		
Sheep Creek Water Company Preliminary Engineering Report, November 19 th , 2018	California Rural Water Association		
Well Completion Report (Well 11), August 22 nd , 2018	Sheep Creek Water Company		
CEQA Study (Well 10)	Sheep Creek Water Company		
California Regulations Related to Drinking Water, September 23 rd , 2016	Division of Drinking Water		
Additional Water Source Project, November 2016	Sheep Creek Water Company		
Sheep Creek Water Company Water Master Plan, December 2006	Sheep Creek Water Company		

Water Supply-Demand Assessment

<u>Water Supply:</u> SCWC's current water supply portfolio consists of five groundwater wells (2A, 3A, 4A, 5, and 8) and a tunnel (also classified as groundwater⁽³⁾) that flows continuously by gravity which is located in the Swarthout Canyon. Per California Rural Water Association's 2018 Preliminary Engineering Report (CRWAPER), well production has dropped due to age, condition and ground water level declines as illustrated in **Figure 2**.

³ Refer page 2, SWRCB Compliance Order No. 05-13-18R-002 (Appendix B)



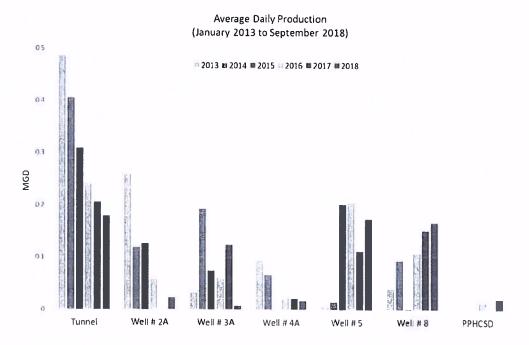


Figure 2. Average Daily Production Per Source (January 2013 through September 2018)

(Source: Sheep Creek Water Production Records)

Recognizing this trend, SCWC has proactively explored several well development projects in recent years and has been successful in developing Well 11. Pump test and well completion reports for Well 11 indicate production rates between 250 gpm and 300 gpm. Based on the recently completed "Hydrogeological Investigation of Swarthout Canyon, Sheep Creek Area and Mojave Basins", prepared by California Rural Water Association, dated October 2018, six potential well locations were identified within the northern and central parts of the SCWC service area within the Alto Subarea of the Mojave Basin. PPHCSD owns one active well (Well 9B) located within the Alto Subarea with an operating production rate during the summer months of 260 gpm, +/- 1,300 ft deep. Based on the hydrogeological investigation performed by CRWA, other wells within the Alto Subarea have production rates ranging between 250 gpm to 350 gpm. For the purposes of this evaluation a well production rate of 250 gpm will be used for Well 11 and for proposed future wells. Well production rates and rated/design capacities for Existing, Near-Term, and Long-Term supply scenarios are shown in Table 4.2.

Table 4.2 - Summary of Existing and Projected Supplies for Sheep Creek Water Company

		Opera	itional ⁽⁴⁾ Ca	pacity		Rated Cap	acity
Supply Type	Source	GPM	MGD	AFY	GPM	MGD	AFY
	Well 2A	30	0.04	48	400(5)	0.58	645
	Well 3A	25	0.04	40	400(6)	0.58	645
Existing	Well 4A	60	0.09	97	800 ⁽⁷⁾	1.15	1290
CXISCILIS	Well 5	124	0.18	200	540 ⁽⁷⁾	0.78	871
	Well 8	141	0.20	227	520 ⁽⁵⁾	0.75	839
	Tunnel	122	0.18	197	n/a	n/a	n/a
Total		502	0.72	810	2,660	3.83	4,291
	Well 2A	30	0.04	48	400	0.58	645
	Well 3A	25	0.04	40	400	0.58	645
	Well 4A	60	0.09	97	800	1.15	1290
Near-Term	Well 5	124	0.18	200	540	0.78	871
(2018-2019)	Well 8	141	0.20	227	520	0.75	839
	Well 11	250 ⁽⁵⁾	0.36	403	275 ⁽⁶⁾	0.40	444
	Tunnel	100	0.14	161	n/a	n/a	n/a
Total		730	1.05	1,177	2,935	4.23	4,734
	Well 2A	30	0.04	48	400	0.58	645
	Well 3A	25	0.04	40	400	0.58	645
	Well 4A	60	0.09	97	800	1.15	1290
	Well 5	124	0.18	200	540	0.78	871
_	Well 8	141	0.20	227	520	0.75	839
Long-Term	Well 11*	250	0.36	403	275	0.40	444
(2020-2024)	Well 12*	250	0.36	403	275	0.40	444
	Well 13*	250	0.36	403	275	0.40	444
	Well 14*	250	0.36	403	275	0.40	444
	Well 15*	250	0.36	403	275	0.40	444
	Tunnel	100	0.14	161	n/a	n/a	n/a
Total		1,730	2.49	2,790	4,035	5.81	6,508

^{*} Proposed Future Wells (assumed similar production value as Well 11)

Tunnel flows have also declined steadily as shown in Figure 3A especially in years 2016-2018 coming out of the recent drought event. At the current rate of decline, future tunnel flows are projected to be about 100 gpm. Therefore, 100 gpm for the tunnel flow was used in this analysis. Figures 3B and 3C show tunnel production and well pumping levels declining consistently during post-drought years.

⁷ Source: Well Pump Curve & SCWC pump records



⁴ Source: July 2018 SCWC Production Report

⁵ Source: Well Pump Curve

⁶ Source: Well Completion Report

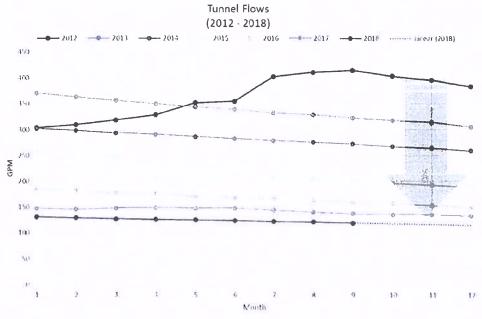


Figure 3A. Tunnel Flow Decline
(Source: Sheep Creek Water Company Production Records)

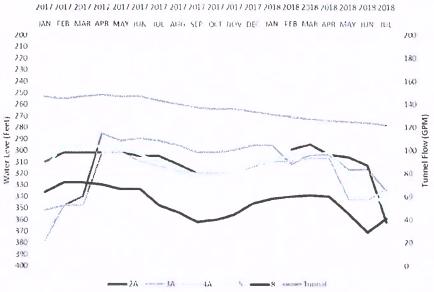


Figure 3B. Tunnel Flow Production (gpm) and Well Pumping Levels (feet)
(Source: Sheep Creek Water Company Production Records)



Well Static Level and Tunnel Production (2017 to 2018)

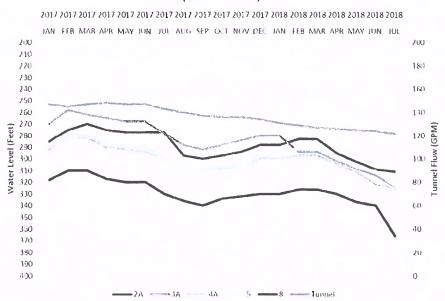


Figure 3C. Tunnel Flow Production (gpm) and Well Static Levels (feet)
(Source: Sheep Creek Water Company Production Records)

<u>Demand Trends:</u> The recent drought period in California occurred during 2012 through 2016. Per California Code and Regulations (CR) 64558 (2), the water system must be able to meet the 10-year Max Day Demand (MDD) at all times⁽⁸⁾. Upon review of SCWC's production records, the highest 10-year Max Day Demand (MDD) of 1.78 MGD⁽⁹⁾ occurred during the drought period on July 12, 2014. When compared with the value cited in the Source Capacity Violation of 2.09 MGD⁽¹⁰⁾ it was apparent that there was a discrepancy in the production values recorded for Well 8 in 2014. Upon review of Well 8 runtime records and discussion with SCWC's staff it was determined that recorded values of production on July 12, 2014 accounted for two days of runtime instead of one day. Production records for 2008 through 2018 were reviewed again to confirm that no other year recorded MDD values higher than 1.78 MGD and it was confirmed.

In 2014, SCWC met customer demand mainly due to a higher ground water table and with more than twice the supply from the tunnel compared to recent years. For comparison purposes, Well 8 produced an average of 450 gpm in 2014, but only 141 gpm in 2018. As shown on Figure 4, MDDs for 2016 and 2018 dropped in April and June respectively and the demands were met. However, due to low groundwater recharge rates and consecutive days of summer water

¹⁰ Refer page 20, SWRCB Compliance Order No. 05-13-18R-002 (Appendix B)



⁸ Per CCR 64554 (b), each pressure zone within the system should be evaluated in order to meet MDD and peak hourly demand (PHD). However, due to the scope and purpose of this effort, MDD and PHD were evaluated for the system in its entirety.

⁹ MDD values were derived from Sheep Creek Water Company's daily production records

consumption in August 2018 as well as August and September 2016, SCWC had to purchase water from PPHCSD. Based on discussions with SCWC's staff, water was purchased in order to meet daily demands from large users like the Snowline Joint Unified School District (SJUSD). In 2018, SJUSD requested water service from PPHCSD, which reduces SCWC's Near-Term (2018-2019) and Long-Term (2020-2024) demands. A list of SJUSD's accounts and service status with SCWC are listed in Table 4.3. Currently, four (4) of the SJUSD's 13 service meters have been physically disconnected from SCWC's water system and are no longer served by SCWC. Removing these four (4) services reduces the 10-YR MDD from 1.78 MGD to approximately 1.77 MGD. In the future, when the seven (7) remaining service accounts are connected to PPHCSD's system, the 10-YR MDD will be reduced to approximately 1.60 MGD (i.e. 10-YR MDD w/o SJUSD). Since SCWC did not have daily consumption records for SJUSD, MDD values for the school district were estimated from maximum month usage data. Calculations and assumptions are provided in Appendix C. Since those seven (7) remaining service accounts are still physically connected to SCWC's water system, the recommended solution accounts for them in the demand. Based on the service connection moratorium established by the DDW(11) for SCWC, no additional growth is considered in this analysis.

Table 4.3 - Snowline Joint Unified School District Service Status

Account	Location	Status	Future Plan			
169	Elementary 1"	Connected to SCWC	Will Remain			
578	Elementary 2"	Connected to SCWC	Will Remain			
219	80 Acre SHS	Connected to PPHCSD	-			
220	80 Acre SHS	Connected to PPHCSD	-			
642	80 Acre 1" Spanish Hill	Connected to PPHCSD	-			
646	80 Acre 1" 4" By-pass	Connected to SCWC	Will be Connected to PPHCS			
657	80 Acre 1" District Office	Connected to SCWC	Will be Connected to PPHCSI			
997	80 Acre 2" Green House	Connected to PPHCSD	-			
999	Chapperal	Connected to SCWC	Will be Connected to PPHCSI			
1013	80 Acre 2" Maintenance	Connected to SCWC	Will be Connected to PPHCSI			
1014	80 Acre 2" Football	Connected to SCWC	Will be Connected to PPHCSI			
1045	80 Acre 2" Curriculum	Connected to SCWC	Will be Connected to PPHCSI			
1064	80 Acre 2" Eagle Summit	Connected to SCWC	Will be Connected to PPHCSI			

¹¹ Refer page 4, SWRCB Compliance Order No. 05-13-18R-002 (Appendix B)



<u>Reliability:</u> Since SCWC water supply is primarily from groundwater sources, CCR 64554 (3) (c) states that such a system must be able to meet MDD without the largest well supply in service. This requirement was accounted for under both Near-Term and Long-Term scenarios to enhance system reliability.

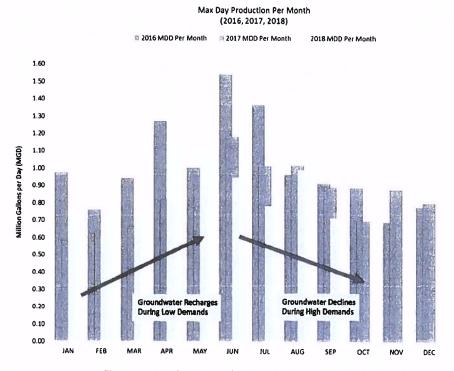


Figure 4. Maximum Production Per Month (2016 to 2018) (Source: Sheep Creek Water Company Production Records)

Supply-Demand Evaluation: Table 4.4 summarizes various supply-demand scenarios evaluated.

- Scenarios 1 and 2 evaluate Existing (October 2018) supply and demand conditions.
- Scenarios 3, 4, and 5 evaluate Near-Term (2018-2019) supply and demand conditions.
- Scenarios 6 through 11 shows Long-Term (2020-2024) supply-demand conditions with additional well supplies.

Scenarios 3 through 10 were evaluated with largest source offline (0.36 MGD) and declining tunnel supply (i.e. 0.18 MGD to 0.14 MGD). Scenario 11 utilizes the reduced demand of 1.60 MGD, therefore, it can only be considered a future scenario until those remaining services are disconnected.

Tables 4.5A through **4.5E** show the supply-demand breakdown per scenario. In summary, scenario 10 (refer to **Table 4.5E**) shows that with four (4) additional wells, the SCWC's system is able to meet the 10-YR MDD regulatory requirement of 1.78 MGD.



Table 4.4 – Supply-Demand Scenario Summary

		DE	MAND		l	SU	PPLY		1 - 1 P. E	美国
Scenario	Period		Total Demand		Source		7-4-1	C	SUPPLY minus DEMANI	
300110110	7 01100	MDD Description			Total Wells	Tunnel	Tunnel Total S			
			AFY	MGD	AFY	AFY	AFY	MGD	AFY	MGD
1	Existing	10-YR MDD	1994	1.78	613	197	810	0.72	-1184	-1.06
2	Existing	10-YR MDD (w/o SUSD)	1792	1.60	613	197	810	0.72	-982	-0.88
3	Near-Term (2018-2019)	10-YR MDD	1994	1.78	613	161	774	0.69	-1220	-1.09
4	Near-Term (2018-2019)	10-YR MDD (w/o SUSD)	1792	1.60	613	161	774	0.69	-1018	-0.91
5	Near-Term (2018-2019)	August 2018 MDD	1075	0.96	613	161	774	0.69	-301	-0.27
6	Long-Term (2020-2024)	10-YR MDD	1994	1.78	1419	161	1581	1.41	-413	-0.37
7	Long-Term (2020-2024)	10-YR MDD (w/o SUSD)	1792	1.60	1419	161	1581	1.41	-211	-0.19
8	Long-Term (2020-2024)	10-YR MDD	1994	1.78	1823	161	1984	1.77	-10	-0.01
9	Long-Term (2020-2024)	10-YR MDD (w/o SUSD)	1792	1.60	1823	161	1984	1.77	192	0.17
10	Long-Term (2020-2024)	10-YR MDD	1994	1.78	2226	161	2387	2.13	393	0.35
11	Long-Term (2020-2024)	10-YR MDD (w/o SUSD)	1792	1.60	2226	161	2387	2.13	595	0.53



Scenarios 1 & 2: Meeting 10-YR MDD with Existing Supply (Without Well 11)

- Scenario 1 in Table 4.4 shows that SCWC is not able to meet the 10-YR MDD regulatory requirement of 1.78 MGD as of October 2018. Well 11 was not considered to be in operation.
- Scenario 2 shows that SCWC is not able to meet the future 10-YR MDD (w/o SJUSD) of 1.60 MGD.

Conclusion: As shown in **Table 4.5A**, SCWC will have a supply deficit 1.06 MGD and 0.88 MGD for the 10-YR MDD and future 10-YR MDD w/o SJUSD, respectively.

Table 4.5A – Existing Water Supply Portfolio and Demand Breakdown

Supply in October 2018 (no Well 11)

	Operational Capacity			
Source	GPM	MGD	AFY	
Well 2A	30	0.04	48	
Well 3A	25	0.04	40	
Well 4A	60	0.09	97	
Well 5	124	0.18	200	
Well 8	141	0.20	227	
Tunnel	122	0.18	197	

	Summary	MGD
	Total Supply	0.72
ario 1	Demand (10-YR MDD)	1.78
Scenario 1	Supply minus Demand (10-YR MDD)	-1.06
ario 2	Demand (10-YR MDD w/o SUSD)	1.60
Scenario 2	Supply minus Demand (10YR w/o SUSD)	-0.88

Scenarios 3, 4 & 5: Meeting Near-Term (2018-2019) Demands with Well 11 Operational

- Scenarios 3 and 4 shows that SCWC is not able to meet the 10-YR MDD regulatory requirement of 1.78 MGD and the future 10-YR MDD (w/o SJUSD) of 1.60 MGD even with Well 11 added to the supply portfolio.
- Scenario 5 shows that SCWC may even be short of supply to meet near-term projected MDD of 0.96 MGD, which is estimated from 2018 MDD values w/o SJUSD connections.

Conclusion: As shown in **Table 4.5B**, SCWC will have a supply deficit 1.09 MGD and 0.91 MGD for the 10-YR MDD and future 10-YR MDD w/o SJUSD, respectively.

Table 4.5B - Near-Term Water Supply and Demands with Well 11

Supply Near-Term

	Operational Capacity		
Source	GPM	MGD	AFY
Well 2A	30	0.04	48
Well 3A	25	0.04	40
Well 4A	60	0.09	97
Well 5	124	0.18	200
Well 8	141	0.20	227
Tunnel	100	0.14	161
Well 11 *	250	0.36	403

* Offline

	Summary	MGD
	Total Supply (largest well offline)	0.69
Scenario 3	Demand (10-YR MDD)	1.78
Scen	Supply minus Demand (10-YR MDD)	-1.09
Scenario 4	Demand (10-YR MDD w/o SUSD)	1.60
Scen	Supply minus Demand (10YR MDD w/o SUSD)	-0.91
Scenario 5	August 2018 MDD	0.96
Scen	Supply minus Demand (August 2018 MDD)	-0.27

Scenario 6 through 10: Meeting Long-Term (2020-2024) Demand with Well and Additional Future Wells

- Scenarios 6, 7, and 8 shows that by adding two or three additional wells, SCWC is still not able to meet the 10-YR MDD regulatory requirement of 1.78 MGD as shown in Tables 4.5C and 4.5D.
- Scenario 9 shows that when SJUSD services are removed from the system, SCWC could meet the
 future 10-YR MDD w/o SJUSD of 1.60 MGD with a surplus supply of 0.17 MGD by adding three (3)
 additional wells as shown in Table 4.5D.
- Scenario 10 shows that with four (4) additional wells, the system will be able to meet the 10-YR
 MDD regulatory requirement of 1.78 MGD as shown in Table 4.5E.

Conclusion: Scenario 10 provides SCWC with the ability to meet the 10-YR MDD regulatory requirement of 1.78 MGD by adding four (4) new supply wells with a surplus supply of 0.35 MGD.

Table 4.5C - Long-Term Water Supply and Demands with 2 Future wells (Wells 12 & 13)

Supply Long-Term

	Operational Capacity			
Source	GPM	MGD	AFY	
Well 2A	30	0.04	48	
Well 3A	25	0.04	40	
Well 4A	60	0.09	97	
Well 5	124	0.18	200	
Well 8	141	0.20	227	
Tunnel	100	0.14	161	
Well 11	250	0.36	403	
Well 12	250	0.36	403	
Well 13 *	250	0.36	403	

0			

J)	Summary	MGD
	Total Supply (largest well offline)	1.41
Scenario 6	Demand (10-YR MDD)	1.78
Sceni	Supply minus Demand (10-YR MDD)	-0.37
ario 7	Demand (10-YR MDD w/o SUSD)	1.60
Scenario 7	Supply minus Demand (10YR w/o SUSD)	-0.19

Table 4.5D – Long-Term Water Supply and Demands with 3 Future wells (Wells 12,13, &14)

Supply Long-Term

_	Оре	Operational Capacity		
Source	GPM	MGD	AFY	
Well 2A	30	0.04	48	
Well 3A	25	0.04	40	
Well 4A	60	0.09	97	
Well 5	124	0.18	200	
Well 8	141	0.20	227	
Tunnel	100	0.14	161	
Well 11	250	0.36	403	
Well 12	250	0.36	403	
Well 13	250	0.36	403	
Well 14 *	250	0.36	403	

* Offline

	Summary	MGD
	Total Supply (largest well offline)	1.77
ario 8	Demand (10-YR MDD)	1.78
Scenario 8	Supply minus Demand (10-YR MDD)	-0.01
Scenario 9	Demand (10-YR MDD w/o SUSD)	1.60
Scen	Supply minus Demand (10YR w/o SUSD)	0,17



Table 4.5E – Long-Term Water Supply and Demands with 4 future wells (Wells 12,13,14, and 15)

Supply Long-Term

MPFII COLLA	ALCO DE LA COLONIA DE LA COLON		
	Operational Capacity		
Sounce	GPM	MGD	AFY
Well 2A	30	0.04	48
Well 3A	25	0.04	40
Well 4A	60	0.09	97
Well 5	124	0.18	200
Well 8	141	0.20	227
Tunnel	100	0.14	161
Well 11	250	0.36	403
Well 12	250	0.36	403
Well 13	250	0.36	403
Well 14	250	0.36	403
Well 15 *	250	0.36	403

^{*} Offline

		Summary	MGD	
20.00		Total Supply (largest well offline)	2.13	
	Scenario 10	Demand (10-YR MDD)	1.78	
	Scena	Supply minus Demand (10-YR MDD)	0.35	
	Scenario 11	Demand (10-YR MDD w/o SUSD)	1.60	_
	Scena	Supply minus Demand (10YR w/o SUSD)	0.53	



Figure 5 shows a summary of the demand and supply estimates discussed compared to the monthly MDD from 2016 through 2018 derived from SCWC production reports.

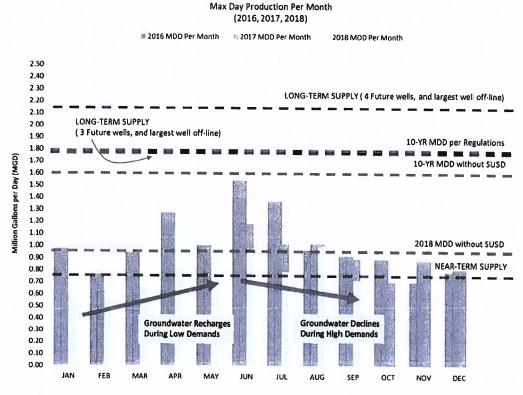


Figure 5. Maximum Production Per Month (2016 to 2018) compared to MDD scenarios (Source: Sheep Creek Water Company Production Records)

Evaluating Storage Needs: Existing storage capacity in the system is 6.119 million gallons (MG). Table 4.6 shows the number of consecutive days the storage volume alone will be able to meet MDD and peak hourly demand (PHD) in the system when all tanks are at full capacity. Per CCR 64554 (a) (2), SCWC is required to meet four (4) hours of PHD with source capacity, storage capacity, and/or emergency source connections. Table 4.7 shows that SCWC is able to meet these regulatory requirements (4hrs x PHD) with its current storage capacity.



Table 4.6 - Storage Capacity and Demands

То	tal Storage Ca	pacity = 6.11	9 MG	
Demand Type	MDD	PHD	MDD	PHD
Demand Type	10-YR	10-YR	10-YR w/o SUSD	10-YR w/o SUSD
Demand (MGD)	1.78	2.67	1.6	2.4
Storage Utilization (days)	3.44	2.29	3.82	2.55

Typically, volume required for storage takes into account operational, fire protection, and emergency storage. The following is an excerpt from the American Water Works Association (AWWA) Manual 50 (pg. 69), Water Resource Planning on determining storage needs:

"For most systems, regulatory storage is typically about 25 percent of the maximum daily demand. This allows reservoirs to be used for flow equalization because water fills the storage tanks during periods of low demand and drains during periods of high demand. Fire suppression storage is that volume required to supply the maximum fire flow, and emergency storage is for use in the event of a water supply system failure. There is no particular standard specifying how much emergency storage a water purveyor should have. The amount of storage required depends on available water supplies, inter-connections to other utilities, reliability of power sources, the presence of alternative power sources, and the reliability of the water system as a whole."

For this analysis, conservative values for operational (30% x MDD⁽¹²⁾), fire flow (4hrs x $4000 \text{gpm}^{(13)}$), and emergency storage ($100\% \text{ MDD}^{(9)}$) criteria were used. In all cases, as noted in **Table 4.7**, SCWC's existing and long-term storage needs will not exceed its current capacity, not accounting for additional growth.

Table 4.7 – Storage Requirements

Storage Cap	acity (Gallons)	
Minimum Requirements	10-YR MDD	10-YR MDD w/o SUSD
Regulatory (4hrs x PHD)	445,000	400,000
Fire Protection (4hrs x 4000 gpm)	960,000	960,000
Equalization Volume (30% MDD)	534,000	480,000
Emergency Storage (100% MDD)	1,780,000	1,600,000
Total Storage	3,274,000	3,040,000
Total Storage (MG)	3.27	3.04

¹³ Typical for Commercial/Industrial Buildings



¹² Refer to pg. 2-11, SCWC Water Master Plan, December 2006

5.0 Development of Alternatives

Two alternatives were developed in close coordination with SCWC and DDW. The compliance order specifies that, at minimum, one alternative shall include consolidating SCWC's water system with a nearby water purveyor, in this case, PPHCSD. The two alternatives evaluated herein are:

- 1. Maintain SCWC as a private water purveyor by drilling and operating additional water supply wells
- 2. Interconnect and consolidate SCWC system with PPHCSD

The items evaluated for each alternative are the technical feasibility to accomplish the objective of resolving the source capacity issue and the financial impact to the SCWC to accomplish this objective.

Compliance with Waterworks Standard

SCWC was formed in 1913 and some components of the water system are over 100 years old. The "Preliminary Engineering Report (PER) Sheep Creek Water Company", prepared by California Rural Water Association (CRWA), dated November 19, 2018 includes a comprehensive, system-wide condition assessment of SCWC's water system. CRWA is providing on-going technical assistance to address global water system deficiencies, estimated at over \$12 million. The scope of the study prescribed herein focuses on resolving source capacity issues; the upgrades recommended are limited to infrastructure directly impacted where proposed improvements relate to the evaluated alternatives.

Pending State Legislation for Lowering MCL for Hexavalent Chromium

The scope of this study does not include the cost of removing hexavalent chromium (CR-6) or the feasibility of adding such facilities to either SCWC or PPHCSD. Once the State issues the new maximum contaminate level (MCL) for CR-6 in Drinking Water Sources, such an evaluation will be necessary. At this time, the new MCL is expected to be less than 10 ppb. Based on information from PPHCSD, seven existing wells currently indicate levels of CR-6 above 10 ppb in the Oeste Subarea of the Mojave Basin. SCWC's Well 11 has not indicated detectable levels of CR-6 nor has PPHCSD's Well 9, both of which are in the Alto Subarea of the Mojave Basin.

Approach to Planning Level Costs

Planning level construction costs for identified facilities were developed using industry standards developed by the Association of Advancement for Cost Engineering (AACE International). Our approach applies a single contingency (e.g., percentage of base cost) using a Class 4 estimate, which reflects between 1% to 15% design completion. The mid-range level of accuracy was applied to the base estimates, which correspond to a 50% contingency.

The operating and maintenance life cycle costs were provided for a thirty (30) year period, assuming an inflation rate of three percent (3%) and an interest rate of three percent (3%).



Feasibility Report for Sheep Creek Water Company Addressing Water Source Capacity Issues

Alternative 1- Maintain SCWC as a Private Water Purveyor by Drilling and Operating Additional Water Supply Wells

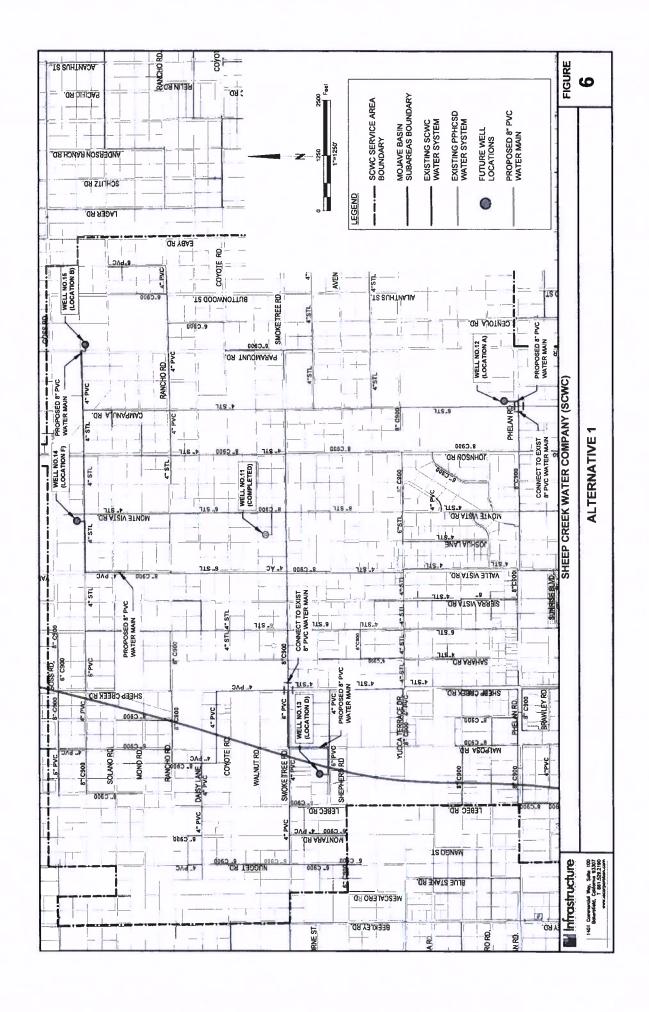
This alternative consists of adding four (4) new supply wells to SCWC's system as recommended in the Supply and Demand Analysis section presented above.

The scope of this study does not include a well siting study. Therefore, as recommended by the "Preliminary Engineering Report (PER) Sheep Creek Water Company", prepared by California Rural Water Association (CRWA), dated November 19, 2018, the planning level costs herein were developed using the PER's proposed alternatives for drilling additional wells in the Alto Subarea of the Mojave Basin. Further investigations and well pilot testing are being performed by CRWA and are not included in this scope. Based on four (4) assumed well site locations as shown in Figure 6, a conceptual design was developed for Alternative 1. The hydraulics of the water system will need to be evaluated during final design to confirm the actual pressures of the distribution system at the points of connection, to calculate the total dynamic head at each well pump and optimize pump performance. It it is assumed that the same pumping characteristics of Well 11 apply to the future wells. Table 5.1 lists the actual depths of Well 11 and corresponding wellhead facility and conveyance systems.

Table 5.1 Design Assumptions Based on Completed Well 11

Description	Well 11 (Completed)	Assumptions for Future Wells
Well Production Rate	Actual 250 gpm	250 gpm
Existing Ground Elev	3,900 feet	
Well Depth	Actual 1,500 feet	1,200 to 1,500 feet
Well Casing Size	14/16 inches diameter	14/16 inches diameter
Pumping Water Elev	Actual 2,913 feet	
	(depth 987 feet)	
Static Water Elev	Actual 2,964 feet	
Static Water Elev	(depth 936 feet)	
Pump and Motor	150 hp (200 hp VFD)	150 hp (200 hp VFD)
Length of Pipe to Connect to the Distribution System	Actual 1,200 If of 8-inch diameter PVC (C900) pipe	Varying lengths of 8-inch diameter PVC pipe
Wellhead Treatment	Disinfection Only	Disinfection Only
Property	APN 3069-321-18 2.5 acres	2.5 acres





Cost Evaluation

For the purposes of the estimating the cost of future wells, and offsite piping, the cost breakdown for the recently completed Well 11 was used (refer to **Appendix A**). A summary of the planning level capital costs and operating and maintenance cost for Alternative 1 are summarized in **Table 5.2**. A detailed cost breakdown of Alternative 1 is provided in **Exhibit 5.1**.

Table 5.2 Summary of Planning Level Budget for Alternative 1

Description	Total	Cost per Connection	Cost Per Share
Planning Level Budget	\$5.8 million	\$4,200	\$700
Additional Annual O&M Costs	\$230,000	\$165.83	\$28.75
Net Present Value Additional O&M Cost	\$6.5 million	\$4,700	\$800
2019 Cost of Water for Well 11	\$95,900	\$69	\$12

Implementation Schedule

Assuming the California Rural Water Association proceeds with the pilot well testing early 2019, the SCWC can begin developing the well sites. The current schedule shown in **Exhibit 5.2** assumes SCWC will develop one well site per year, thus the additional four wells can potentially be completed by the fourth quarter of 2022. If additional funding becomes available to SCWC, the schedule can potentially be updated.

Alternative 2- Consolidation with PPHCSD

This alternative consists of consolidating with PPHCSD. PPHCSD covers 128 square miles, has over 6,800 connections, and serves the unincorporated communities of Phelan and Pinion Hills. PPHCSD has expressed concerns with SCWC's deficient water facilities as described in CRWA's PER. The cost of water system upgrades to bring SCWC's entire system up to California Waterworks Standards and PPHCSD's Standards for public water systems are estimated at over \$12 million per the CRWA PER. For the purposes of this consolidation evaluation, Alternative 2 will not include \$12 million in systemwide upgrades, instead the consolidation alternative will be limited to include the following priorities, which are necessary to operate these systems together:

- Installing flow control facilities at the connections and infrastructure to connect both water systems (pipelines, valves, appurtenances)
- Install fire hydrants/blowoffs at all dead ends (implement PPHCSD's flushing plan)
- Install automatic meter reading devices (to match PPHCSD's system)

Evaluating Source Capacity of Combined System

PPHCSD's 10-yr MDD of 4.8 MGD and has an existing source capacity of 5.1 MGD. SCWC's 10-yr MDD is 1.78 MGD and a source capacity of 1.1 MGD, including the recently added Well 11. Therefore, combining the systems results in a combined 10-yr MDD of 6.6 MGD and a combined source capacity of 6.2 MGD. The largest well in the combined system is PPHCD's Well 14 with a capacity of 1.0 MGD (735 gpm). With the largest PPHCSD well offline, the combined source capacity is deficient by 0.4 MGD. To offset this deficiency, Alternative 2 will include the addition of one future well to the system.



System Connections

PPHCSD has suggested the three connection locations and corresponding pipelines as shown in **Figure 7**. It is expected that once the two water systems are connected, having consistently higher pressures in the SCWC service area may cause failures in the historically low-pressure system (i.e. water main breaks, appurtenance leaking, etc). Further analysis is required to determine if there are needs for rezoning or installing additional pressure reducing stations in the SCWC system. At this time however, our analysis indicates that there are no fatal flaws with moving forward with connecting both systems. It is assumed that at each connection a flow control facility will be needed; this is accounted for in the capital cost estimate.

Cost Evaluation

A summary of the planning level capital costs and operating and maintenance cost for Alternative 2 are summarized in **Table 5.3**. A detailed cost breakdown of Alternative 2 is provided in **Exhibit 5.3**. Although not included in this analysis, it is possible that SCWC users may have a fee added to their water bill by PPHCSD, unless State funding covers the costs of upgrading SCWC's water system to California's Waterworks Standards.

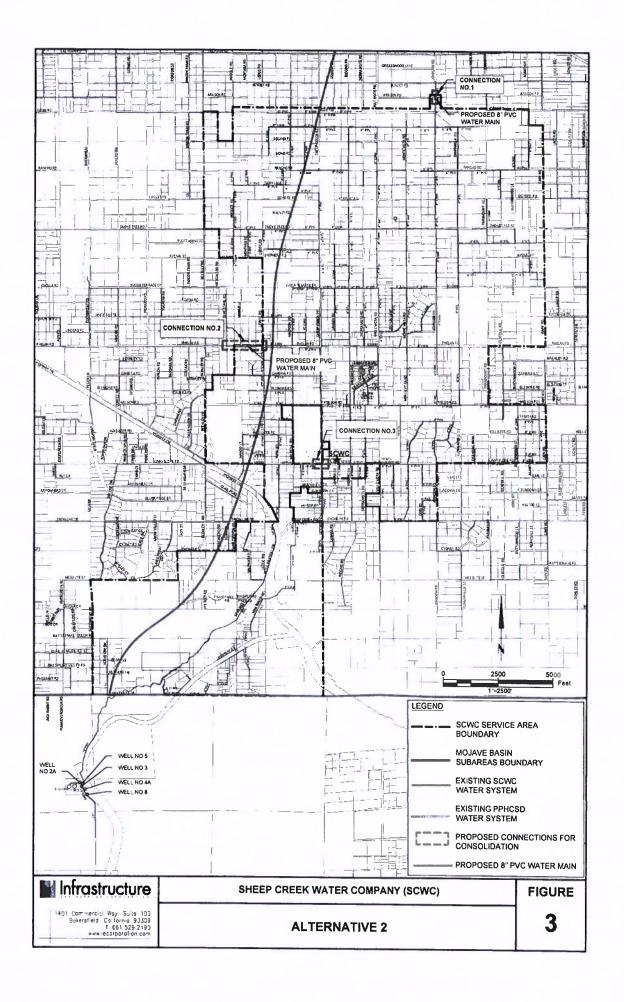
Table 5.3 Summary of Planning Level Budget for Alternative 2

Description	Total	Cost per Connection	Cost Per Share
Planning Level Budget	\$3.3 million	\$2,400	\$418
Additional Annual O&M Costs	\$120,000	\$86.52	\$15
Net Present Value Additional O&M Cost	\$3.4 million	\$2,400	\$422

Implementation Schedule

This consolidation is contingent on the timeline for State approval of Proposition 1 funding (application submitted by CRWA). The approximate schedule shown in **Exhibit 5.4**, assuming no major hindrances to the process, the consolidation could be completed within four (4) years. Therefore, assuming the funding process takes 12 months (typical State process is 8-months) and the project begins early 2020, the project could potentially be completed by the fourth quarter of 2022.





6.0 Comparative Analysis and Recommendation

The key factors that were compared between the two alternatives are as follows:

Table 6.1 Comparison of Alternatives

Key Comparable Factors	Alternative 1	Alternative 2
Source Capacity Issue Resolved	Yes	Yes
Planning Level Construction Cost Per Connection	\$4,200	\$2,400
Planning Level Construction Cost <i>Per Share</i>	\$700	\$418
NPV Additional O&M Cost Per Connection	\$4,700	\$2,400
NPV Additional O&M Cost Per Share	\$800	\$422
2019 MWA Cost of Water for Well 11 Cost Per Connection	\$69.14	\$0
2019 MWA Cost of Water for Well 11 Cost Per Share	\$12	\$0
Implementation Schedule	Completed 4 th QTR 2022	Completed 4 th QTR 2022
Monthly Water User Base Fee (Excluding consumption charges)	All Meters \$55	1" Meter \$27.89 2" Meter 81.39 4" Meter \$246.7

Both Alternative 1 and Alternative 2 offer long-term solutions to the source capacity issue. Based on discussions with SCWC's General Manager and the Board, the preferred alternative at this time is Alternative 1. In our professional opinion, since the SCWC is currently moving towards solving their source capacity issue and have completed Well No 11 and will be initiating a well siting study through CRWA to continue increasing their source supply, we recommend the SWRCB move forward with developing a Compliance Plan for SCWC to resolve their source capacity issue.

Non-engineering factors excluded from this feasibility study may require further analysis, consideration and resolution during the next phase:

- Based on the meeting held with DDW on January 7, 2019, SCWC understands that the State will make the final determination on the selected alternative shall funding from the Division of Financial Assistance be awarded to this project
- 2. Technical, managerial, and financial (TMF) capability of SCWC
- 3. Impact of new water rates and water connection fees on existing SCWC users
- 4. Opportunities to negotiate Temporary Transfer agreements with parties within the Alto Subarea and negotiate lower water purchase rates
- 5. Legal and administrative cost associated with consolidation
- 6. Impacts to the Mojave Basin with the development of future wells (initial conversations with the Mojave Water Agency (MWA) determined no immediate impacts to the Alto Subarea since due to replacement of water resources with State Water Project)



Exhibit 5.1: Alternative 1 – Planning Level Cost

Sheep Greek Water Company Alternative 1 Planning Level Capital Cost Estimate Exhibit 5.1

Drill 1,500 foot 16" Well 5.0	ב	Unit Quantity	Cost/Unit	Suptotal
	EA	4	\$500,000	\$2,000,000
150 HP Submersible Motor & Pump ¹	EA	4	\$125,480	616'105\$
Electrical and Instrumentation ¹	1.5	4	\$47,845	\$191,379
Well Head and Site Work ¹	S	4	\$37,586	\$150,345
Well 12 Offsite Piping	Ę	240	\$80	\$19,200
Well 13 Offsite Piping	LF	2,800	08\$	\$224,000
Well 14 Offsite Piping	LF	2,100	08\$	\$168,000
Well 15 Offsite Piping	LF	750	08\$	000'09\$
			Subtotal	\$3,314,800
		ວ	Contingency (50%)	\$1,657,400
Total Pla	lann	ing tevel C	Total Planning Level Construction Cost	\$4,972,200
Administ	istrat	ion, Engine	Administration, Engineering, CM (10%)	\$497,200
		CEOA (C	CEQA (Combine Projects)	009'95\$
Property Acquisition for Four Well Site Locations (2.5 acres/each) 2	Site 1	ocations (2.5 acres/each) 2	\$280,000
	_	otal Plann	Total Planning Level Budget	\$5,806,000
soo	ost P	er Connect	Cost Per Connection (1,387 total)	\$4,200
		ost Per Sh	Cost Per Share (8,000 total)	002\$

¹ 2018 Actual Construction Cost for SCWC Well 11 (Not including SCWC staff time) ² 2018 Property Value and Acquisition Costs for Well 11 for \$28,000/acre

٠,	^	553,600	\$	TOTAL Estimated Annual O&M Cost \$ 553,600 ->
	^	230,000	\$	Estimated Annual O&M for Well 11 and 4 Additional Wells \$ 230,000
لأث	^	323,633	s	2017 Actual SCWC O&M Expense (Only Production/Distribution) \$ 323,633 ->
				Opinion of Probable Operation and Maintenance Costs

3 Number of shares used was 8,000

Opinion of Net Present Value Operation and Maintenance Costs	30-year Life Cycle O&M Costs \$ 6,476,000	Cost Per Connection (1,387 total) \$ 4,700	Cost Per Share (8,000 total) \$ 800	
Opinion of Net Present Value Opi				

Cost of Replacement Water (purchase from MWA)		
2019 Well 11 Cost of MWA Water \$639 ac-ft (Operate 8hrs/day, 150 ac-ft per year) \$	\$ (006'56
4 Future Wells Cost of Replacement Water (600 ac-ft per year)	-	Unknown
Annual Cost Per Connection (1,387 total) \$	\$ (69.14

						11.70 <== ESTIMATED ANNUAL O&M INCREASE	3.98 <<== ESTIMATED MONTHLY ORM INCREASE
ary	Cost Per	Share 3	40.45	28.75	69.20	11.70	• 86.0
E	8	s	\$	\$	\$	\$	\$
O&M Summan	Cost Per	Connection	233.33	165.83	399.16	67.51	5.63
	ರ	5	s	\$	s	\$	\$
			٨	Ŷ	۸		

Exhibit 5.2:

Alternative 1 – Preliminary Implementation Schedule

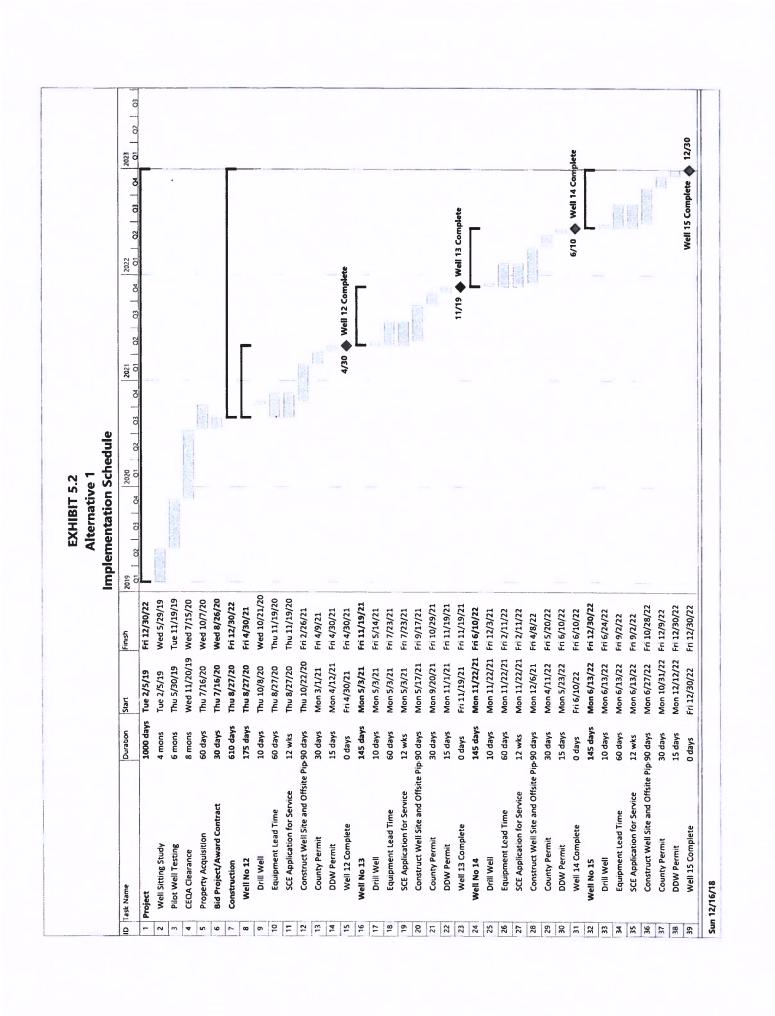


Exhibit 5.3: Alternative 2 - Planning Level Cost

Exhibit 5.3
Sheep Creek Water Company
Alternative 2
Planning Level Capital Cost Estimate

Describation	שחט	Cadnery	COSTONE	Total Cost
Connection 1 Flow Control Facility	รา	τ	\$100,000	\$ 100,000
Connection 1 Offsite Piping	LF.	572	\$80	\$ 18,000
Connection 2 Flow Control Facility	S	1	\$100,000	\$ 100,000
Connection 2 Offsite Piping	J.	1,700	\$80	\$ 136,000
Connection 3 Flow Control Facility	S	τ	\$100,000	\$ 100,000
Connection 3 Offsite Piping	LF	100	\$80	\$ 8,000
Drill 1,500 foot 16" Well ¹	EA	1	\$500,000	\$ 500,000
150 HP Submersible Motor & Pump 1	EA	1	\$125,480	\$ 125,500
Electrical and Instrumentation 1	SI	1	\$47,845	\$ 47,800
Well Head and Site Work 1	ภ	1	\$37,586	\$ 37,600
Install Blowoff at Dead Ends	EA	22	\$2,000	\$ 54,000
Install Automatic Meter Reading Devices	EA	1,387	\$500	\$ 693,500
			Subtotal: \$	\$ 1,920,400
			Contingency (50%)	\$ 960,200
	Tota	al Planning	Total Planning Level Construction Cost \$	\$ 2,880,600
		0	Cross Connection Survey	000'09 \$
	Adr	ninistratior	Administration, Engineering, CM (10%)	\$ 288,100
**************************************		Ū	CEQA (Combine Projects)	\$ 45,000
Property Acquisition f	or One V	/ell Site Loc	Property Acquisition for One Well Site Location (2.5 acres/each)2	\$ 70,000
		Total	Total Planning Level Budget	\$ 3,343,700
		Cost Per C	Cost Per Connection (1,387 total)	\$ 2,400
		Cost	Cost Per Share (8,000 total)	\$418

²⁰¹⁸ Actual Construction Cost for SCWC Well 11 (Not including SCWC staff time)

² 2018 Property Value and Acquisition Costs for Well 11 for \$28,000/acre

ŀ			
\$		\$ 120,000	TOTAL Estimated Annual O&M Cost
Ş	^	\$ 60,000	Estimated Annual O&M for Flow Control Facilities
\$	^	\$ 60,000	Estimated Annual O&M for One Additional Well
	Ŷ	N/A (4)	2017 Actual PPHCSD O&M Expense
ರ			Opinion of Probable Operation and Maintenance Costs

³ Number of shares used was 8,000

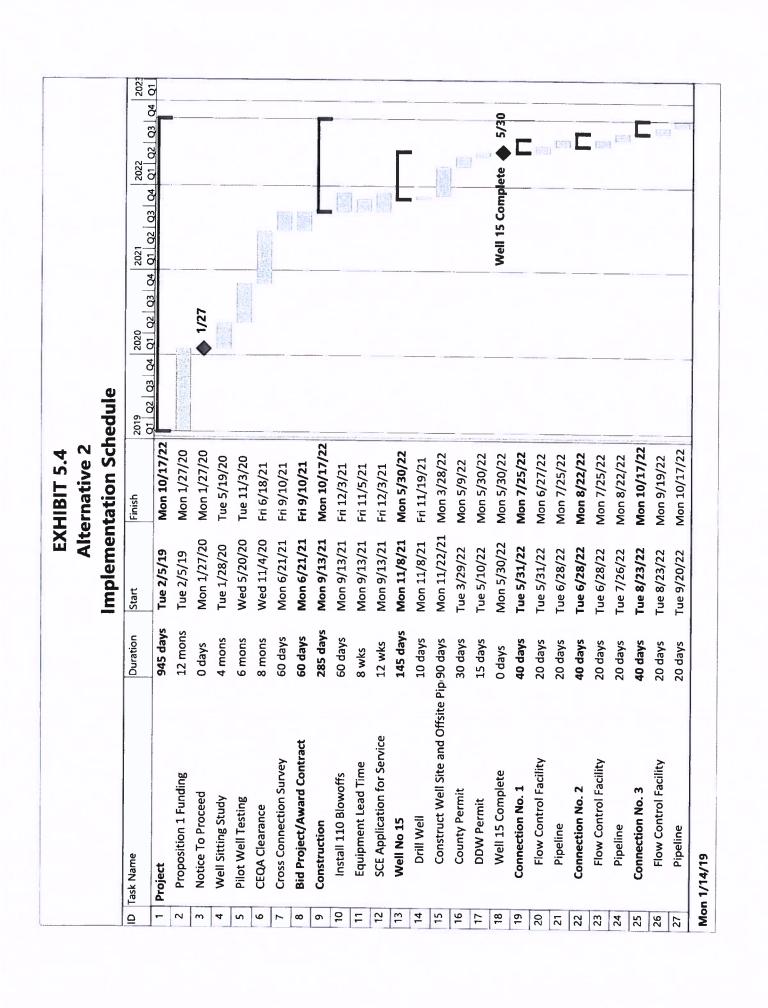
⁴ PPHCSD's Annual O&M cost is not applicable under Alternative 2. It is possible that an assessment district will be formed and the cost to upgrade the system to meet state Waterworks Standards would apply to SCWC service area at a later date.

\$422	Cost Per Share (8,000 total)
\$ 2,400	Cost Per Connection (1,387 total)
3,379,000	30-year Life Cycle O&M Costs \$ 3,379,000
	Opinion of Net Present Value Operation and Maintenance Costs

Connection Share 3 Connection Share 3 4 43.26 \$ 7.50 4 86.52 \$ 15.00 5 7.21 \$ 1.25					15.00 <== ESTIMATED ANNUAL ORM INCREASE	1.25 <== ESTIMATED MONTHLY O&M INCREASE
	Cost Per Share ³		3 7.50	3 7.50	15.00	3 1.25
	-	_	:	3		-
	Cost Per onnection		43.26	43.26	86.52	7.21
^ ^ 	ີ ວ		\$	s	\$	₩.
		Ņ	٨	Ņ		

O&M Summary

Exhibit 5.4: Alternative 2 - Preliminary Implementation Schedule



Appendix A

Meetings, notification	ons administrative expenses		
California Environ	mental Quality Act		
11/14/2016	Tom Dodson and Associates- Initial Study	\$8,275.00	
12/14/2016	Tom Dodson and Associates- Initial Study	\$1,656.00	
1/13/2017	Tom Dodson and Associates- Initial Study	\$2,960.00	
2/17/2017	Tom Dodson and Associates- Initial Study	\$622.50	
6/19/2017	Tom Dodson and Associates- Initial Study	\$787.50	
10/18/2017	Tom Dodson and Associates- Mitigation	\$975.00	
10/16/2017	Tom Dodson and Associates- Mitigation	\$450.00	
12/20/2017	Tom Dodson and Associates- Mitigation	\$1,250.00	
4/16/2018	Tom Dodson and Associates- Mitigation	\$2,012.50	
4/16/2018	Jericho Systems- Nesting Bird Survey	\$315.00	
5/17/2018	Tom Dodson and Associates- Mitigation	\$300.00	
Agency Fees			
5/23/2017	SBC- Land Use Services- Initial Study	\$3,100.00	
12/20/2017	Tom Dodson and Associates- NOD Fees	\$2,266.25	
3/21/2018	SWRCB- WDID Number	\$526.00	
Engineering- SW	PPP		
3/31/2018	Albert Webb Associates	\$387.00	
5/26/2018	Albert Webb Associates	\$172.00	
9/29/2018	Albert Webb Associates	\$2,257.50	
Assessment collection	ons		
Aug-17		\$4,632.80	
Mar-18		\$8,251.26	
Aug-18		\$4,824.58	
Property purchase			\$70,148.05
Legal/Escrow Exp	penses		
2/21/2017	Gresham- Property Contract	\$1,598.00	
3/22/2017	Gresham- Property Contract	\$3,376.00	
6/14/2017	Gresham- Property Contract	\$1,056.00	
6/21/2017	UPS Store - Carter Notary	\$30.25	
7/19/2017	Gresham- Property Contract	\$144.00	
7/30/2018	SBC- Land Use Services- Address	\$158.00	
8/10/2018	Flagstar Bank Wire Transfer- Escrow	\$2,500.00	
8/21/2018	Flagstar Bank Wire Transfer- Escrow	\$46,000.00	
8/23/2018	Flagstar Bank Wire Transfer- Escrow	\$350.00	
8/7/2018	Gresham- Property Purchase	\$2,359.00	
9/10/2018	Gresham- Property Purchase	\$10,156.80	
10/8/2018	Gresham- Property Purchase	\$2,420.00	
Drill 1,500 foot 16"	well with mil-slot casing		
4/27/2010	Laure Mah Damett Dutting	4445 000 00	

\$145,206.00

4/27/2018 Layne- Mob, Permit, Drilling

5/23/2018	Layne- Mob, Drilling, Casing, Air Lift	\$180,565.60	
	Layne- Casing, Swab Pump	\$56,626.60	
8/1/2018	•	\$79,648.23	
Vertical turbine mo	otor, pump, column pipe, tube and shaft	, , , , , , , , , , , ,	
9/24/2018	Layne- Pum, Motor, Wire, Column Pipe	\$125,479.69	
9/24/2018	Layne- Well Foundation	\$8,571.43	
Electrical equipmen	nt, conduit wiring		
Southern Californ	ia Edison		
8/8/2018	Deposit- Rights Check	\$2,500.00	
SCE Electrical Se	ervice & Meter Panels		\$6,000.00
			\$45,000.00
			\$15,000.00
Well Electrical			, , ,
8/31/2018	Center Electric- Long Lead Filter	\$1,781.53	
8/31/2018	Center Electric- 200hp VFD Cabinet	\$29,380.00	
11/20/2018	Center Electric- Conduit, Wire, Controls	\$13,327.87	
10/2/2018	Weber Concrete	\$855.32	
Generator Rental			
Well Head & Site V	Vork		
Site Work	. ••••		
	Weber Concrete	\$2,494.68	
	All American Fence	\$6,715.00	
10/18/2018	Ledesmon Trucking- Gravel Purge	\$525.00	
11/5/2018	Shed World- Chlorine/VFD Housing	\$4,951.11	
Environmental pr	otection		
4/3/2018	Hub Construction- Straw Wattle	\$383.51	
Water Quality			
8/17/2018	Clinical Lab- Title 22 Sampling	\$3,214.00	
9/27/2018	USA Blue Book- Chlorine Pump Equipment	\$953.08	
Pipe Work			
	Inland Water Works	\$8,663.84	
	SCWC Labor & Equipment		
8/14/2018	Caltrol- Actuator Valves	\$2,220.00	
8/21/2018	McCall's Meters- Flow Meter	\$2,771.73	
10/9/2018	Home Depot- Bolts Pipe Stands	\$143.66	
Offsite pipeline upg	rades		
Materials		\$106,493.27	
	pairs, Engineering		
3/13/2018		\$680.00	
	SCWC Labor & Equipment		

7/25/2018	Jeff Brown	¢620.00
		\$630.00
8/1/2018	Daniel Edmond	\$720.00
8/9/2018	Jeff Brown	\$1,204.00
8/9/2018	Daniel Edmond	\$1,462.50
8/15/2018	Jeff Brown	\$630.00
8/20/2018	Daniel Edmond	\$150.00
8/23/2018	Jeff Brown	\$420.00
10/25/2018	Desert Design- Water Truck & Excuvator	\$3,100.00
10/26/2018	Jeff Brown	\$175.00
12/4/2018	Craig Cummings	\$120.00

\$322.40

Well #11 Well Head Material

Meals

ii #11 Well Head Material		
1 6" x 4" FL Reducer	63	63
2 4" x 2" FL Tee	90	180
3 4" x 12" FL Spool	115	345
1 4" x 24" FL Spool	146	146
2 4" x 36" FL Spool	175	350
2 4" x 60" FL Spool	234	468
1 4" x 48" FL Spool	204	204
1 4" x 72" FL Spoot	257	257
1 4" FL Tee	100	100
1 4" FL Mueller Check Valve	540	540
1 4" FL CLA-VAL	2600	2600
5 4" FL LR 90	105	525
2 2" Companion Flange	15	30
2 2" Gal Tee	6.99	13.98
3 2" Gal Close Nipple	7.85	23.55
1 2" x 1" Gal Bushing	6.98	6.98
l 1" Galv Nipple	2.99	2.99
1 2" Drain Valve	225	225
1 1" Gate Valve	55	55
1 2" ARI Rolling Diaphragm Valve	568.24	568.24
1 1" Ari Valve	124	124
2 30" Pipe Stands	275	550
26 4" Bolts	5	130
24 4" Gaskets	2	48
2 2" Bolts	2.25	4.5
2 2" Gaskets	2	4
3 4" FL x PO Adaptor	54	162
4 4" Fitting Restraints	27	108
3 4" Bell Restraint	36	108
1 4" FL x PO Valve	520	520

1 6" Valve Can Set	20	20
80 4" C900 PVC	2.27	181.6

Smoketree Line Replacement Material

4790 8" C900 PVC DR14	9.6	45984
700 8" C900 PVC DR18	7.15	5005
60 6" C900 PVC DR14	6.75	405
60 6" C900 PVC DR18	4.07	244.2
20 4" C900 PVC DR14	2.27	45.4
23 8" FL BF Valve	671	15433
6 6" FL x PO Gate Valve	740	4440
1 4" FL PO Gate Valve	520	520
5 8" FL TEE	184	920
5 8" x 6" FL x PO TEE	130	650
1 8" x 6" FL TEE	200	200
1 8" x 4" FL TEE	200	200
2 8" FL Cross	235	470
1 8" x 6" FL Reducer	104.79	104.79
25 8" FL x PO Adaptor	83.99	2099.75
5 6" FL x PO Adaptor	92	460
2 4" PO 90	49.65	99.3
36" PO Mueller Hydrant	2250	0
1 48" PO Mueller Hydrant	2325	2325
3 54" PO Mueller Hydrant	2700	8100
2 12" Mueller Hydrant Extension	500	1000
1 18" Mueller Hydrant Extension	574	574
1 24" Mueller Hydrant Extension	671	671
33 8" Fitting Restaint	49	1617
18 6" Fitting Restraint	33	594
5 4" Fitting Restraint	27	135
36 8" Bell Restraint	80	2880
3 6" Bell Restraint	50	150
1 8" FCA- 8.05od	230	230
4 8" 501 Romac Coupling	231	924
2 8" 501R Extended Romac Coupling	245	490
59 8" x 6" Bolts	6	354
2 4" Bolts	5	10
48 8" Gaskets	4	192
10 6" Gaskets	3	30
2 4" Gaskets	2	4
23 8" Valve Can Set	23.14	532.22
8 6" Valve Can Set	20	160
210 1" Kicker Pipe	2.1	441
1 Chlorine Tablets #5 Jar	16	16
6 Detector Tape- Roll	18	108
		_

2 Permatex-Tube

8 16 98833.66 106493.27

		TOTAL PROJECT
Meetings, notifications administrative expenses		
California Environmental Quality Act		\$28,312.25
Tom Dodson and Associates- Initial Study, Mitigation	\$19,603.50	•
Agency Fees	\$5,892.25	
Engineering- SWPPP	\$2,816.50	
Assessment collections		\$17,708.64
Assessment # 1 August 2017	\$4,632.80	,
Assessment # 2 March 2018	\$8,251.26	
Assessment # 3 June 2018	\$4,824.58	
Property purchase		\$70,148.05
Legal Expenses- Property Contract	\$6,174.00	,
Escrow Expenses	\$48,850.00	
Legal Expenses- Property Purchase	\$14,935.80	
Misc- Fees	\$188.25	
Drill 1,500 foot 16" well with mil-slot casing		\$470,617.86
Layne- Permit, Drill, Casing, Air Lift, Swab & Test Pump	\$462,046.43	,
Layne- Concrete Foundation	\$8,571.43	
150 HP Submersible motor & pump, 1,100' 5" column pipe, wire	·	\$125,479.69
Layne- Supply & Install Pumping Equipment	\$125,479.69	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Electrical equipment, conduit wiring	•	\$47,844.72
Southern California Edison	\$2,500.00	- · · · , - · · · · -
SCE Electrical Service & Meter Panels	-	
VFD cabinet and control	\$45,344.72	
Conduit, wiring, labor		
Well Head & Site Work		\$37,586.20
Site Work- Concrete, Fencing, Housing, Protection	\$19,236.38	,
Environmental protection	\$383.51	
Water Quality	\$4,167.08	
Pipe Work	\$13,799.23	
Smoketree Line Replacement Project		\$116,107.17
Material	\$106,493.27	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Permits, Road Repairs, Engineering	\$680.00	
Labor & Equipment	\$8,933.90	
TOTAL SMOKETREE WELL #11 PROJECT COST-		\$913,804.58

Feasibility Report for Sheep Creek Water Company Addressing Water Source Capacity Issues

Appendix C

APPENDIX C

Maximum Day Demand Estimation Calculation for Snowline Joint Unified School District

MDD = Maximum Day Demand

MMD = Maximum Monthly Demand

SCWC = Sheep Creek Water Company

SUSD = Snowline Joint Unified School District

Assumption:

$$\frac{\text{MDD(SCWC)}}{\text{MDD(SUSD)}} = \frac{\text{MMD(SCWC)}}{\text{MMD(SUSD)}}$$

Using July 2014 demand of 1.78 MGD, with all services removed except elementary school:

Account #	Location	July 2014 Useage (cubic feet)
169 *	Elementry 1"	15978
578 *	Elementry 2"	69910
219 **	80 Acre SHS	22260
220 **	80 Acre SHS	23360
642 **	80 Acre 1" Spanish Hill	2620
646	80 Acre 1" 4" By-pass	35679
657	80 Acre 1" District Office	6992
997 **	80 Acre 2" Green House	10710
999	Chapperal	6080
1013	80 Acre 2" Maintenance	180
1014	80 Acre 2" Football	345300
1045	80 Acre 2" Curriculum	950
1064	80 Acre 2" Eagle Summit	120

^{*} not included in calculations

$$\frac{1.78 MGD}{\text{MDD(SUSD)}} \cong \frac{1.29 MGD}{0.11 MGD}$$

$$MDD(SUSD) \cong 0.15 MGD$$

Reduction in the 10-YR MDD without eleven (11) SUSD services is $1.78-0.15\cong1.63$ MGD

Similarly, without four (4) SUSD services:

$$\frac{1.78 \ MGD}{\text{MDD(SUSD)}} \cong \frac{1.29 \ MGD}{0.01 \ MGD}$$

 $MDD(SUSD) \cong 0.01 MGD$

Reduction in the 10-YR MDD without four (4) SUSD services is $1.78 - 0.01 \cong 1.77 \text{ MGD}$

^{**} not served by SCWC

Appendix D

Sheep Creek Water Company 4200 Sunnyslope Rd. P.O. Box 291820 Phelan, CA 92329-1820

Office (760) 868-3755/Fax (760) 868-2174
Email <u>sheepcreck@verizon.net</u>/<u>www.sheepcreekwater.com</u>

December 27, 2018

Additional Items needed to be added to SWRCB Feasibility Report

- The State of California in 2015 required a cut of 25% and Sheep Creek Water Company has complied with this requirement and continues to meet the 25% plus additional.
- Sheep Creek Water Company has continued to cut water use every year since 2015
 - o 20% 38% reduction, each year the percentage of water use continues to be reduced.
- Water use is generally controlled by the allotment on the shares and the cost of the water.
- With the implementation of a tiered rate structure, water use will continue to remain within the production of the company.
 - o Tier 1 rate includes water available at the Wrightwood Well Site.
 - Tier 2 rate includes water pumped within the MWA Alto Sub Area. This rate includes the MWA replacement cost.
 - o Tier 3 rate is set at a much higher rate to continue to discourage water use and the rate includes funds to help pay the cost of additional water sources or upgrades to the existing water system.
- Water allotments will be adjusted monthly based on the pumping capacity at the Wrightwood Well Field.
 - New Allotment Schedule to be approved by Shareholders with lower allotments based on lower productions.
- With increased water rates in the additional Tier Rates, water use will continue to remain lower than normal
- Sheep Creek plans to keep water rates higher to help control water use.
- With the addition of up to 2 additional wells, this will be sufficient to maintain the current usage along with having a backup supply of water.
 - O With the cost to produce the water out of the wells in the MWA Alto Sub Area, the usage will remain lower due to customers not willing to pay the higher water cost.
- If Grant Funding is unavailable, new wells will be funded with the following options with Shareholder approval
 - o Temporary increase on service charge
 - o Assessment on Shares
 - o Tier 3 Overage rate includes assessment charge to fund additional improvements.
 - o As growth continues, additional wells will be installed with the sale and installation of new services.
- Sheep Creek Plans for the new normal water use to remain similar to the current years water use.
- Possible completion of Well #10 with in the Los Angeles County.
 - o Retest pump well to determine location of hexavalent chromium.
 - o If Hexavalent Chromium can be removed, work with PPHCSD to wheel water through PPHCSD system at a determined rate per acre foot.

State Water Board Approved Corrective Action Plan





State Water Resources Control Board

Division of Drinking Water

January 3, 2020

Chris Cummings, General Manager Sheep Creek Water Company P.O. Box 291820 Phelan, CA 92329 sheepcreek@verizon.net

Dear Mr. Cummings:

RESPONSE TO CORRECTIVE ACTION PLAN FOR COMPLIANCE ORDER NO. 05-13-18R-002

The State Water Resource Control Board, Division of Drinking Water (Division), received a revised Corrective Action Plan from the Sheep Creek Water Company public water system (System) on August 28, 2019. The corrective action plan was submitted in response to Compliance Order No. 05-13-18R-002 (Order).

The System's response informed the Division that on August 17, 2019 the shareholders of the System gave authority to the Board of Directors to proceed with drilling the additional groundwater wells required to meet source capacity requirements as imposed by Title 22, California Code of Regulations (CCR) Section 64554. The decision to drill additional groundwater wells was made rather than consolidating with the neighboring public water system, Phelan Pinon Hills Community Services District (PPHCSD). Even though the System's Board of Directors has stated that they are prepared to proceed with the development of additional groundwater wells to meet compliance with the Order, the Division still recommends that based on historic water production data and the overall cost analysis that was completed by the System, that the best long term and most feasible solution would be to pursue a consolidation with the neighboring public water system.

The System's feasibility study that was completed on January 14, 2019 by Infrastructure Engineering Corporation (IEC) demonstrated that the cost for consolidation would amount to a net present value of \$3.4 million dollars including operation and maintenance costs in comparison to the net present value of \$6.5 million dollars including operation and maintenance costs to maintain the System as a public water purveyor and drill additional sources. The cost analysis further supports that consolidation with PPHCSD would be a more financially viable alternative. The Division would also like to address that if the System is not financially prepared to proceed with constructing and equipping the

E. JOAQUIN ESQUIVEL, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

necessary water supply sources to return to compliance, the project might result in a higher financial burden to the System and its customers.

Since the System's decision was reached in August 17, 2019, the Division has had several community shareholders reach out with concerns about the overall costs for this project and the impact it would have for those individuals that are unable to afford it. The System should assess all the financial risks that could result from this project and should be prepared to budget the project without causing financial hardship on the System or its shareholders. For reference, the feasibility study has been attached to this letter.

In addition to the cost analysis, the Division is concerned with the seasonal variability in the System's source production and how unreliable the System's sources have proven to be over time. Average production data provided by the System for 2018 is depicted in Figure 1 below, demonstrating that source capacity was about 62% less during the summer month of July 2018 in comparison to the production capacity during the winter month of February 2018. Records prior to 2018 typically show that the System's sources tend to experience their lowest capacities during the months of highest demand during the summer. Seasonal variations in the System's production capacity need to be considered when determining compliance with source capacity regulations.

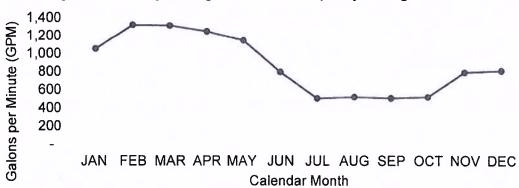
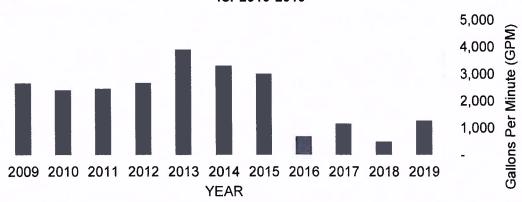


Figure 1. Monthly Average Production Capacity throughout 2018

In addition to seasonal variability, the last 10 years of the System's production data indicate a significant decline in source capacity. Information from the System's monthly production updates show that during July 2018 the system's average monthly production capacity for all its sources combined was down approximately 81% from what it was 10 years before in 2009. Figure 2 demonstrates the overall decline and fluctuation of the System's source capacity from 2009 to 2019 during the month of July. The System's monthly production reports further establish that its sources are heavily impacted during drought conditions as experienced during the past 10 years. Since the occurrence or the length of a drought is unpredictable, these sources are continually susceptible to producing record low flow rates as experienced during July 2018. Considering the System's historical variability in production, the System should understand the risk associated with their current sources in moving forward towards their compliance with

source capacity requirements. For reference, the monthly production summaries reported by the System have been attached to this letter.





Furthermore, it is the policy of the Division, as described under Section 106.3 of the Water Code and Section 116680 of the Health and Safety Code, to encourage water system consolidation whenever it provides for a more sustainable water system to ensure the human right to water. It is our belief that the formation of a consolidated water system that incorporates PPHCSD and the System will provide a significant increase in technical, managerial, and financial capacity resulting in greater water security for the community. Therefore, if the System decides to consolidate at any point and a consolidation agreement has been reached and executed by the two water systems, the Division is willing to accept for review and approval an updated Corrective Action Plan with an implementation schedule for achieving source capacity requirements through the consolidation project.

Despite these concerns it is understood that the System has decided to proceed with constructing as many water supply sources as may be necessary to meet source capacity requirements as imposed by Title 22, California Code of Regulations (CCR) Section 64554. Therefore, the Division hereby approves the Corrective Action Plan as submitted on August 17, 2019 and will be issuing an amended compliance order with deadlines based on the Corrective Action Plan's timeline. Please note that the proposed deadlines on the Corrective Action Plan will be modified to make up for the time it has taken the Division to respond to this matter.

RESPONSE TO REQUEST FOR REDUCTION OF MAXIMUM DAY DEMAND VALUE

As part of the Corrective Action Plan the System has also requested that the Division reduce the maximum day demand (MDD) from the value of 2.09 million gallons per day (MGD) to 1.78 MGD. Although during the past year there has been an increase in overall production as the result of increased Wrightwood Well site production, newly-installed Well 11, and conservation efforts that have taken place in recent years, the Division

cannot use the increase in production as a justification to change or lower the existing MDD value. The MDD is a calculated value based on the past 10 years of water demand and must be determined per Title 22 California Code of Regulations Section 64554.

As for the System no longer serving the Snowline School District, the Division cannot consider the reduction of these service connections until all service connections supplying the Snowline School District are physically removed. Please note that the request to reduce the MDD by the School District's usage would still be subject to the Division's review and approval and may not result in a reduction of the current MDD value.

The Division also reviewed the submitted pumping records for July 2014 and has determined that it cannot discount the requested production values for Well 8. The total amount produced by Well 8 on July 12, 2014 still needs to be considered regardless of operational settings that should have taken precedence.

The Division will however accept that the 2014 Annual Report that the System submitted showed a total production of 6.04-acre-feet, rather than the documented 6.4-acre-feet, which would reduce the MDD value to 1.97 MGD. Therefore, the Division will hereby correct the MDD value from 2.09 MGD to 1.97 MGD in the amended compliance order to the system.

The Division appreciates your continued efforts towards resolving this compliance issue. If you have any questions regarding this letter, please contact Hector Cazares at (909) 383-4312 or by email at hector.cazares@waterboards.ca.gov.

Sincerely,

Eric J. Zúñiga, P.E. District Engineer

San Bernardino District

Evic yevinger

Southern California Field Operations Branch

Enclosures: IEC Feasibility Study

SCWC Monthly Production Records 2006 - 2019

cc: Omid Rabbani, SWRCB-DDW Water System Partnership Coordinator

omid.rabanni@waterboards.ca.gov

Karen Nishimoto, SWRCB-DDW Senior Engineer – Water System Engagement

Unit South karen.nishimoto@waterboards.ca.gov

Sean McCarthy, DDW Section V Chief sean.mccarthy@waterboards.ca.gov

Don Bartz, PPHCSD General Manager dbartz@pphcsd.org

Sheep Creek Water Company 4200 Sunnyslope Rd. P.O. Box 291820 Phelan, CA 92329-1820

Office (760) 868-3755/Fax (760) 868-2174
Email sheepcreek@verizon.net/www.sheepcreekwater.com

August 28, 2019

Eric J. Zuniga, P.E.
District Engineer
San Bernardino District
Southern California Field Operations Branch
Division of Drinking Water
State Water Resources Control Board
464 W. 4th Street #437
San Bernardino, CA 92401
Eric.Zuniga;a,waterboards.ca.gov

RE: Compliance Order NO 05-13-18R-002
Approved Source Capacity Compliance
MDD Reduction Request

Dear Mr. Zuniga:

This letter is in regards to Compliance Order No 05-13-18R-002 (Compliance Order) issued to Sheep Creek Water Company (SCWC) on August 30, 2018, upon its finding of a violation of California *Health & Safety Code* Section 116555(a)(3) and California *Code of Regulations*, Title 22, Section 64554, based on the most recent ten (10) years of production data.

In Section 5 of its Compliance Order, the Division of Drinking Water (DDW) of the State Water Resources Control Board (SWRCB) directed SCWC to complete a feasibility study (Feasibility Study) to identify and evaluate the principle alternative solutions, including a discussion of the costs and potential environmental impacts, that would allow SCWC to meet a required Maximum Day Demand (MDD) of 2.09 million gallons a day (GPD) or 1,453 gallons per minute (GPM). One of the options that SCWC was directed to evaluate was consolidation with a nearby water district. Being that Phelan-Piñon Hills Community Services District (PPHCSD) surrounds SCWC, consolidation with PPHCSD was evaluated.

In addition to the Feasibility Study being developed, November 19, 2018, SCWC with the help of California Rural Water Association (CRWA) submitted its Preliminary Engineering Report; and, in response to questions and comments posed by the SWRCB, on July 2, 2019, CRWA submitted its Final Engineering Report to the SWRCB, which identified and evaluated the potential development of additional production facilities (Additional Facilities) and potential consolidation with PPHCSD (Consolidation).

The Additional Facilities alternative was evaluated based on the production capacities of SCWC's existing facilities and the viability of locations and projected capacity from up to six additional production facilities. The number of additional production facilities that would be required to

State Water Resources Control Board August 28, 2019 Page 2

allow SCWC to meet its MDD requirements was found to depend upon the flow and water quality obtained from the additional production facilities initially drilled and tested.

The Consolidation alternative was evaluated based on a valuation of SCWC's assets and a plan that were presented to PPHCSD on June 21, 2019. At the PPHCSD Board Meeting on July 17, 2019, the PPHCSD Board rejected the consolidation plan presented by SCWC and did not present SCWC with a counter proposal, effectively eliminating Consolidation as an alternative and leaving SCWC with only the Additional Facilities alternative.

On August 17, 2019, Sheep Creek Water Company held a Special Meeting of the Shareholders to present the alternatives for compliance. The shareholders were informed that PPHCSD had rejected the Consolidation alternative, and presented with the question of whether they would support the Additional Facilities alternative, meaning that SCWC would need to drill additional facilities to comply with the Compliance Order. In the absence of a potential consolidation agreement upon which to vote, the shareholders gave the Board authority to proceed with drilling the required additional production facilities, by an affirmative vote of 3,304 out of the 4,340 votes cast. With the approval of the Sheep Creek Shareholders, SCWC's Board is prepared to proceed with the development of additional facilities to bring SCWC into compliance with the Compliance Order.

Before proceeding with the development of a Correction Action Plan for the Additional Facilities alternative under Section 6 of the Compliance Order, however, SCWC requests that the SWRCB allow SCWC to develop such additional facilities as will meet a lowered MDD of 1.78 GPD or 1,236 GPM, for the following reasons:

- 1. Since July 2018 (when water production was at its lowest), water levels have increased along with production at the Wrightwood Well Site by 525 GPM or .76 MGD.
- With the completion of Well #11, production has increased an additional 251 GPM or .36 MGD.
- 3. Despite recent increases in production and water levels, SCWC Shareholders have continued to conserve water throughout the System, with consumption for July 2019 reflecting a decrease of 47% since July 2014 when compared to SCWC's MDD requirement of 2.09 MGD.
- 4. SCWC is no longer serving a portion of the Snowline School District, as follows:
 - a. Three 2" service connections, one 1" service connection and an 8" fire service connection have been physically removed from the SCWC water system and transferred to PPHCSD, resulting in a total reduction in MDD estimated at .014 MGD or 10 GPM.
 - b. SCWC has one additional 4" service, three additional 2" services and two additional 1" services that are shut off and not operating at this time. SCWC is working with Snowline School District to remove the service connections that are no longer needed due to PPHCSD taking over service. Once these service are disconnected, an additional MDD reduction is estimated at .09 MGD or 65 GPM.

State Water Resources Control Board August 28, 2019 Page 3

- 5. The SWRCB Annual Report for 2014 which was completed in April 2015, reported:
 - a. A max day usage on July 12, 2014 with a total production of 6.04 acre feet, 1.97 MGD or 1,367 GPM; and
 - b. A difference between the reported amount and the compliance order of .12 MGD or 85 GPM.
- 6. A review of the pumping records for July 2014 Well #8 readings indicate that the July 12, 2014 run time would have been for multiple days.
 - a. During 2014, all wells ran during off-peak pumping. The time clock allowed the wells to run a maximum of 9.0 hours per night.
 - b. During the summer of 2014, Wells 2A and 3A were the primary running wells and Wells 4A and 8 were secondary. When the tank level dropped and the primary wells did not fill during the 9 hour run time the secondary wells would run the following night to fill the tank.
 - c. Well #8 showed a run time of 15.5 hours which is 6.5 hours more than the 9 hour allowable time.
 - d. Based on the daily production, Well 8 would have run on July 10, 2014 for the remaining 6.5 hours.
 - e. Well 8's total production should have been 246,240 gallons rather than the 423,700 gallons.
 - f. With the reduced production on Well 8 for July 12, 2014, an additional reduction in MDD is estimated at .18 MGD or 123 GPM.

Based on these factors, SCWC requests a reduction of .314 MGD or 218 GPM, to a new figure of 1.78 MGD or 1,236 GPM, to be achieved from the existing and Additional Production facilities it is preparing to develop. The Corrective Action Plan has been updated based on Shareholder approval of drilling additional wells for compliance.

Sheep Creek Water Company thanks the SWRCB for its help in bringing SCWC into compliance with its Source Capacity requirements, as adjusted by the requested reduction to 1.78 MGD. If you have additional questions regarding this letter please let me know.

Sincerely.

Chris Cummings General Manager

Sheep Creek Water Company

cc: Sean McCarthy Sean.McCarthy@waterboards.ca.gov cc: Hector Cazares Hector.Cazares@waterboards.ca.gov

Enclosures: Page 6 of 2014 EAR

July 2014 Snowline Monthly Usage July 2014 Well Production Data Corrective Action Plan- August 2019

used In 2014:	Source was in operation:	notified? (Y/N)	notified? (Y/N)	was used:

²Inactive sources are not approved as sources of supply and must be physically disconnected or otherwise isolated so that only an intentional act by an operator can place the source in service.

COMMENTS:		
COMMISSION		

5. WATER PRODUCED, PURCHASED AND SOLD

The Maximum Day is the day during 2014 with the highest total water usage. Provide the date for that day in Column B, then complete Columns C, D and E, indicating how much of the water on that day was from each source.

The Maximum Month is the month during 2014 with the highest total water usage. Provide the month in Column B, then complete Columns C, D and E, indicating how much of the water during that month was from each source.

Units of Measure for this table: Acre-feet (AF)

Volumes are based on: METERED VOLUMES

A	В	С	D	E	F	G	Н	I
			Potable	Water				
	Date/ Month	Water Produced from Groundwater (Wells)	Water Produced from Surface Water ²	Finished Water Purchased or Received from another PWS ⁵	Total Amount of Potable Water ^{3*}	Water Sold to Another PWS ⁵	Non-potable (exclude recycled)	Recycled
Maximum Day ¹	7-12-14	6.04	0	0	6.04	0		
Maximum Month	July	122.3	0	0	122.3	0		
January		57.16			57.16			
February		53.46			53.46			
March		66.69			66.69			
April		79.98			79.98			
Мву		100.20			100.2			
June		109.30			109.3			
July		122.30			122.3			
August		108.70			108.7			
September		102.30			102.3			
October		83.68			83.68			

Snowline School District Share Usage July 2014

		June Meter	July Meter			Total
Account	# Location	Reading	Reading	Usage CF	Usage TCF	Shares
169	1" Elementary	238585	254563	15978	15.978	12
219	80 Acre SHS	1843920	1866180	22260	22.26	16
220	80 Acre SHS	5288920	5312280	23360	23.36	17
578	2" Elementary	2335470	2405380	69910	69.91	52
642	80 Acre 1" Spanish Hill	679167	681787	2620	2.62	2
546	80 Agre I ⁿ F.B. Bypuss	726715	762394	35679	35.679	21
657	80 Acre 1" Phonick Office	80984	87376	G:002	6.992	
997	80 Acre 2" Green House	2494980	2505690	10710	10.71	8
999	2ª Chapsurel	151240	157300	6080	6/11	
1813	80 Acre 2º Malntenance	3315950	3316180	180	19,1/8	
1014	80 Agre 4" Football	5844900	63(3024)6	345300	345.3	256
1045	80 Acre 2" Combulton	484810	465760	3150	(1).5(STATE OF
1064	50 Acre 2ª Eagle Sement	4727/95	473910	120	0.12	
				540139		400

Service Connections Physically Disconnected Read by PRHESD-Rain for Disconnection

MDD Reduction Calculation 58,950 CF x 7.48 = 440,946 gallons ÷ 31 days= 14,224 gallons + 1,440 minutes= 9.9 gpm

DAILY PRODUCTION FOR JULY 2014 GALLONS

Date	WELL # 2A		WELL # 4A		WELL#8	GPM	TUNNEL	TOTAL	CU.FT.	A.F.	GРM
1	480000	361000				279	402292.8	1243293	166215.6	3.815	1
2	494000	347000				279	402292.8	1243293	166215.6	3.815	
3	517000	376000				279	402292.8	1295293	173167.5	3.9745	l
4	503000	360000				279	402292.8	1265293			
5	490000	361000				279	402292.8	1253293	167552.5	3.8456	l
6	507000	359000				279	402292.8	1268293	169557.9	3.8917	ı
7	468000	359000	31000	10000	17900	279	402292.8	1288193	172218.3	3.9527	l
8	490000	359000				279	402292.8	1251293	167285.1	3.8395	869
9	379000	359000				279	402292.8	1140293	152445.6	3.4989	792
10	512000	360000				279	402292.8	1274293	170360	3.9101	885
11	353000	350000				279	402292.8	1105293	147766.4	3.3915	768
12	501000	355000	286000		423700	279	402292.8	1967993	263100.6	6.0386	1367
13	509000	360000				279	402292.8	1271293	169958.9	3.9009	883
14	332000	348000	284000		180300	279	402292.8	1546593	206763.7	4.7456	1074
15	408000	355000				279	402292.8	1165293	155787.8	3.5756	809
16	470000	356000				279	402292.8	1228293	164210.3	3.7689	853
17	502000	355000				279	402292.8	1259293	168354.7	3.864	875
18	500000	356000				279	402292.8	1258293	168221	3.861	874
19	500000	357000				279	402292.8	1259293	168354.7	3.864	875
20	448000	345000			210200	279	402292.8	1405493	187900.1	4.3127	976
21	439000	360000				279	402292.8	1201293	160600.6	3.6861	834
22	477000	352000				279	402292.8	1231293	164611.3	3.7781	855
23	398000	357000				279	402292.8	1157293	154718.3	3.5511	804
24	293000	347000	275000		182500	279	402292.8	1499793	200507.1	4.602	1042
25	393000	357000				279	402292.8	1152293	154049.8	3.5357	800
26	285000	345000	296000		205200	279	402292.8	1533493	205012.4	4.7054	1065
27	389000	354000				279	402292.8	1145293	153114	3.5142	795
28	388000	355000	27000	9000	16100	279	402292.8	1197393	160079.3	3.6741	832
29	407000	355000				279	402292.8	1164293	155654.1	3.5725	809
30	258000	345000	242000		176600	279	402292.8	1423893	190360	4.3691	989
31	396000	354000		12000		279	402292.8	1164293	155654.1	3.5725	809
Tti's	13486000	11019000	1441000	31000	1412500		12471077	39860577	5328954	122.31	

A.F. A.F. A.F. A.F. A.F. A.F. Av. mgd mgd cu.ft/day afd 41.380792 33.810985 4.4216017 0.0951212 4.3341516 **279** 0.402293 1.285825 171901.7 3.9455

A.F. **38.26658**

MSEXCEL/DAILYPROD14

SHEEP CREEK WATER COMPANY

TANK #7

TELEMETRY SETTINGS SUMMER SETTINGS

DATE: May 1, 2014

SETTING	2 #	ETTING	9/.
00	= Current Tank Level	LIING	70
01	= Well #2A ON	45	
02	= Well #2A OFF	92	
03	= Well #3A ON	70	
04	= Well #3A OFF	96	
05	= Well #4A ON	20	
06	= Well #4A OFF	87	
07	= Well #5 ON	15	
08	= Well #5 OFF	90	
09	= High Tank Level Alarm	105	
10	= Low Bypass	18	20 and deleving law
11			30 sec. delay on low
12	= Time Clock Bypass Well #2	18	5% below low level is dial out alarm
	= Time Clock Bypass Well #3A	18	Low alarm dial out at 25%
13	= Time Clock Bypass Well #4A	18	
14	= Time Clock Bypass Well #5	18	
15	= Low Alarm Bypass	13	
16	= Well #8 ON	23	
17	= Time Clock Bypass Well #8	21	
18	= Well #8 OFF	88	
19	= Well # ON		
20	= Time Clock Bypass Well #		
21	= Well # OFF		
22	= Keystone Tank #7 Distribution	3600	10% loss based on seconds entered 3600=1 hour, resets level after time set

												Water Levels	9	Static Pumping	410	420 380	410	412 385			SCE	Rating	GPM				9/26/12- Well Approved for service																
	1000			-1								*	Water A	Date	7	14	21	28	Average		SCWC	Average	GPM	988			9/26/12- Well A																
4	Multiper 10	Edison		KWH	20	2	14	18	119	18	18	4	8	15	18	18	124	82	17	18	18	19	17	17	117	14	19	81	15	85	15	18	125	18	Š.	18	8	18	8	17			535
ć	. .			Unds	20	18	4	18	119	18	18	4	₽	5	13	₽	124	₽	11	18	6	19	11	17	117	4	19	2	5	18	15	18	125	28	18	18	₽	\$	18	17			535
		Power Consumption	Meter	Reading	90	3361	3343	3329	119	3311	3293	3275	3261	3243	3228	3210	124	3192	3174	3157	3139	3121	3102	3085	117	3068	3054	3035	3017	3002	2984	5963	125	2951	2933	2915	2897	2879	2861	2843	2826	1	535
	July 2014			Ran	23.8	8 9	59	0.6	57.5	8.9	89	99	89	99	9.0	8.6	58.4	9.2	8.0	06	06	80	83	7.3	54 1	59	06	88	63	8 3	99	98	0.09	81	16	83	8.7	89	8.6	8.3			253 8
•		Hours Pumped		Di G	238	1871.6	1862 7	1856.8	57.5	1847.8	1838 9	1830.0	1823 4	1814 5	1807.9	17989	58.4	1790 3	1782.4	1774 4	1765 4	1756 4	1747.5	1739.2	54 1	1731 9	1726.0	1717 0	1708.2	17019	1693.0	1686.4	1686.4	1677.8	1669 7	1660.6	1652 3	16436	1634 7	1626 1	1617.8		2538
ļ	WELL# 2A																									i																	
MPANY	-			Quantity	1061	396	258	407	2623	388	389	285	393	293	398	477	3267	439	448	200	200	205	470	408	3076	332	209	501	353	512	379	490	3459	468	205	490	503	517	494	480			13486
SHEEPCREEK WATER COMPANY	COMPING REP	pax	Meter	٤	1061	129870	129474	129216	2623	128809	128421	128032	127747	127354	127061	126663	3267	126186	125747	125299	124799	124299	123797	123327	3076	122919	122587	122078	121577	121224	120712	120333	3459	119843	119375	118868	118378	117875	117358	116864	116384		13486
SHEEPCRE	MONITEL	Water Pumped	•	Day	Sub-Total	31	30	82	Sub-Total	28	27	92	52	24	ಜ	8	Sub-Total	21	8	19	18	17	16	15	Sub-Total	14	13	12	11	10	8	80	Sub-Total	20	90	55	8	8	05	10	Previous	Monthly	Total

MSEXCELAMPR

To.Gal. 13,486,000 13,486,000

						SCE Meter # 0828W-000192		Flow Meter- FLOWCOM SN 20023511-8"			Water Levels	Water Above the Bo	P	1		21 206	_	Average					Average Rating		664 VFD		8-18-10 Change Upper Bearing Oil 4,587 3 HRS	on current meter, total HKS on Ot 12,724 5		7-10-12 Replaced Frow Meter	8-30-12 Lightning damaged VED	10/11/12 SCE Meter Removed	10/31/12 New VFD Complete Well on Line	10/31/12 New Hour Meter, Old Reading- 15413 1								
1000	Edison		-			Ø		Ī				_1	1	_1				ď				-,	•				αþ	8	•		ď	, ₽	7	7								
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	Power Consumption	Meter	Reading	S	3361	3343	3329	119	3311	3283	3275	3261	3243	3228	3210	124	3192	3174	3157	3139	3121	3102	3085	117	3068	3054	3035	3017	3005	2984	125	2951	2933	2915	2897	2879	2861	2843	2826		535	
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MONTHLY PL	Water Premond	Wanci Louis	Day	Total	31	8	53	Sub-Total	28	27	3 8	52	24	23	8		21	8	19	18	17	16	15	Sub-Total	14	13	2	=	9	8 8	St. P.	20	s 8	8	8	8	8	5	Previous	Monthly	Total	

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					349-01295		-LOWCOM				Water Levels	Water Above the Bowls	Static	170	165	162	160											ige Upper E		Electric Me		aced Flow I		ning damag	VFD Comp	Hour Meter						
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MONTH July 2014		Hours		5.4	0.0	5.4	00	13.2	70	00	6.5	00	0.0	00	00	00	0.0	00	00	00	00	00	00	11.8	69	00	98	00	00	0.0	00	0 2	0.7	0.0	00	0.0	00	00	00			
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MONTHLY PUMPING REPORT	Water Pumped		Day			93	58	Sub-Total	28	27	56	52	24	23	Z	Sub-Total	21	8	19	18	17	16	15	Sub-Total	14	13	12	=	10	8	8	Sub-Total	20	8	92	\$	63	05	10	Previous	Monthly	

To.Gal. 1,441,000 1,441,000 MSEXCELMPR

						SCE Meter # 349-012954		Flow Meter- FLOWCOM SN 04-06568-8"				Water Levels	Water Above the Bowls	Date Static Pumping	7 120	14 120 106	21 112		Average					SCWC	Rat	GPM	450 VFD 200-1000		8-18-10 Change Upper Beanng Oit 6,122 4 HRS		10-21-10 Hour Meter Not Working	Times estimated using Well #4A readings		11-8-11 New Electric Meter		7-10-12 Replaced Flow Meter		8-30-12 Lightning damaged VFD	11/1/12 New VFD Complete Well on Line	11/1/12 New Hour Meter, Old Reading- 1985 6	i		
	8			40		Ø		Œ				L		L	<u> </u>			L	Į₹					0,	•				φ		₽	F		Ξ		7-		જ	-	11			
	Prod. Mtr Multipier	Edison	Muff	K W.H	640	0	640	0	2040	120	0	800	0	1120	0	0	120	0	120	0	0	0	0	0	1840	720	0	1120	0	0		٥	220	520	0	0	0	0	0	0			5160
1	₹ ₹			Units	16	0	16	0	51	က	0	8	0	28	0	0	က	٥	က	0	0	0	0	٥	46	18	0	88	0	0	0	٥	13	13	0	0	0	0	0	0			129
		Power Consumption	Meter	Reading	16	7957	7957	7941	51	7941	7938	7938	7918	7918	7890	7890	m	7890	7890	7887	7887	7887	7887	7887	46	7887	7869	7869	7841	7841	7841	7841	13	7841	7828	7828	7828	7828	7828	7828	7828		129
	MONTH July 2014		Hours	Ran	6.7	00	6.7	00	15.0	90	00	9.2	00	68	00	0.0	7.8	00	7.8	00	00	00	00	0.0	22 1	9.9	0.0	15.5	00	00	00	00	0.7	0.7	00	00	0.0	00	0.0	0.0			52.3
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SHEEPCREEK WATER COMPANY	MONTHLY PUMPING REPORT	28	Meter	Reading Qu	ဖွ	508490	508490	506724	4038	506724	506563	506563	504511	504511	502686	502686	2102	502686	502686	500584	500584	500584	500584	500584	6040	500584	498781	498781	494544	494544	494544	494544	179	494544	494365	494365	494365	494365	494365	494365	494365		14125
SHEEPCRE	MONINCA	Water Pumped		Day	1	31	30	29	Sub-Total	28	27	92	52	24	23	22	Sub-Total	21	8	19	18	17	16	15	Sub-Total	14	5	12	=	9	දි	80	Sub-Total	07	9	92	8	ន	05	10	Previous	Monthly	Total

3at. 1,412,500 1,412,50

					W-000193		Flow Meter- FLOWCOM SN 911778/20023511-6"				Water Levels	e the Bowls	tic Pumping		205 196	203	203 186						SCE	Rating 11/16/2006	GPM 311				Ę			th 40hp		r not accurate			Flow Meter				
	3	_	-		SCE Meter # 0828W-000193		Flow Meter- FLOW				Water	Water Above the Bowts	Date Static	7	14	21	28	Average					SCWC	Average	GPM	258			8/31/04 Pumping Air		9/5/04 Lowered 50'	Replaced moter with 40hp		1/12/05 Flow meter not accurate	Needs calibrated		7-10-12 Replaced Flow Meter				
Prod. Mir		Edison	Mula. K.W.H	0	0	0	0	19	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	23	0	0	0	0	0	0		
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		Power Consumption	Reading	0	40462	40462	40462	19	40462	40443	40443	40443	40443	40443	40443	0	40443	40443	40443	40443	40443	40443	40443	0	40443	40443	40443	40443	40443	40443	40443	23	40443	40420	40420	40420	40420	40420	40420	40420	
MONTH	301y 2014		Ran	80	0.8	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	00	00	00	00	00	00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.7	00	00	0.0	00	00	00		
WO		Pumped	Reading	08	21833 1	21832.3	21832.3	0.5	21832 3	218318	218318	218318	218318	218318	21831.8	0.0	218318	21831.8	218318	21831.8	218318	218318	218318	0.0	21831.8	218318	218318	21831.8	21831.8	21831.8	21831.8	0.7	218318	21831 1	21831 1	21831 1	218311	21831 1	21831 1	21831.1	
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COMPANY			Ouantity				0	6	6	0	0	0	0	0	0	٥	0	0	0	0	0	0	0	0	0	0	0	0			0	10	1	0	0	0	0	0	٥		
EK WATER ! 'UMPING RE		2	Meter	12	23322	23310	23310	6	23310	23301	23301	23301	23301	23301	23301	0	23301	23301	23301	23301	23301	23301	23301	0	23301	23301	23301	23301	23301	23301	23301	10	23301	23291	23291	23291	23291	23291	23291	23291	
SHEEPCREEK WATER COMPANY MONTHLY PUMPING REPORT		Water Pumped		Sub-Total	31	30	82	Sub-Total	88	27	26	25	24	ಜ	22	Suth-Total	21	8	19	18	17	16	15	Sub-Total	14	13	12	11	10	80	90	Sub-Total	20	96	92	8	03	22	10	Previous	

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Sheep Creek Water Company 4200 Sunnyslope Rd. P.O. Box 291820 Phelan, CA 92329-1820

Office (760) 868-3755/Fax (760) 868-2174
Email sheepcreek@verizon.net/www.sheepcreekwater.com

CORRECTIVE ACTION PLAN

SWRCB Compliance order NO 05-13-18R002

June 2019 Updated August 28, 2019

Sheep Creek Water Company (SCWC) is a private Shareholder owned Water Company with approximately 1,400 shareholders totaling 8,000 shares in the company servicing a portion of the community of Phelan. The majority of SCWC's water supplies come from an underground Tunnel and 5 ground water wells within the Swarthout Canyon. The SCWC water system is recognized by the State Water Resources Control Board (SWRCB), Division of Drinking Water (DDW) as Sheep Creek Water Company (Water System No. CA3610109). The water system is classified as a Community Water System and supplies water for domestic purposes to the unincorporated portions of San Bernardino County in Phelan, CA. DDW regulates the water system under Domestic Water Supply Permit No.78-007 as issued on February 9, 1978 with the newest permit amendment for Well #11 dated November 28, 2018.

Due to drought conditions in the State of California and below average rainfall in the area, in 2016, water supplies within the Swarthout Canyon continued to decline. February 2016, SCWC was capable of producing 3,001 gpm suppling an allotment of 1,000 cubic per share to the 8,000 shares available in the company. May 2016 supply dropped to 2,569 gpm with weekly drops in production and water levels. By the end of August 2016 production on the SCWC supply was down to 640 gpm. Due to the drops in production, the Board of Directors began to lower the allotment on shares to cut water use to remain within production. SCWC received water from Phelan Pinon Hills Community Service District (PPHCSD) from August 2, 2016 through September 6, 2016.

In preparation of the 2017 summer and continued lack of recharge in the Sheep Creek Canyon, the Board of Directors continued to cut the allotment to keep consumption within the available production. In spring 2018, SCWC began to see additional drops in production and water levels with the high of 1,301 gpm in February 2018 and the lowest production in July 2018 at 502 gpm. The Board of Directors continued to implement drastic cuts in the water allotment along with implementing a tiered water rate and increasing overage charges. SCWC began to receive water from PPHCSD on August 10, 2018 and on August 22, 2018, SCWC notified the SWRCB that SCWC will continue to purchase water from PPHCSD. SCWC purchased water from PPHCSD until August 30, 2018.

On August 30, 2018, SCWC received a Compliance order from the SWRCB for a Source Capacity Violation due to SCWC unable to meet the Max Day Demands (MDD). The highest recorded MDD was on July 12, 2014 with a total production of 1.78 million gallons per day (MGD). Upon the receipt of the Compliance Order, SCWC was nearly complete with a secondary source of supply within the Mojave

Water Agency boundaries located in the Alto Sub Basin. Well #11 was approved and permitted by the SWRCB, DDW on November 28, 2018 with a production of 251 gpm.

As required by the SWRCB Compliance Order, a feasibility study by Infrastructure Engineering Corporation (IEC) was completed with two alternative plans for bringing SCWC into compliance. Due to SCWC being a Shareholder owned company overseen by a Board of Directors elected by the Shareholders, the Board began exploring both alternatives for compliance. The Board of Directors planned to present both alternatives to the Shareholders at the SCWC Annual Shareholders Meeting on May 11, 2019 but did not have enough information regarding consolidation to ask for a vote. SCWC sent a letter to the SWRCB-DDW on April 19, 2019 requesting an extension of time to have a vote of the Shareholders as to the preferred alternative of compliance. On May 10, 2019, the SWRCB-DDW granted SCWC an extension of time until August 31, 2019 for preferred plan of compliance.

The following timeline for Shareholder approved alternative compliance plan:

- Revised Compliance Plan Due- June 1, 2019
- PPHCSD Discussions and Consolidation Plan- June 2019 July 2019
 - o SCWC proposed consolidation plan to be submitted to PPHCSD- June 7, 2019
 - o Appraisal of Sheep Creek Water District- July 1, 2019
 - o Additional Committee Meeting(s) to discuss proposed consolidation
- Discuss with SWRCB-DFA for available funding opportunities
- Prepare Special Shareholders Meeting- July August 2019
 - o Prepare agenda with proposed alternatives of compliance
 - \circ Prepare information and material for Shareholders- July 1 12, 2019
 - o Send information to Shareholders for Special Meeting- July 17, 2019
- Special Shareholders Meeting- August 17, 2019
 - O Vote of the Shareholders to approve preferred alternative for compliance
- Notify SWRCB-DDW of Shareholder approved alternative for compliance- August 30, 2019

Drill Additional Well for Source Capacity Compliance

SCWC has taken action over the past several years to reduce the systems MDD. SCWC began reducing water allotments along with reducing demand in May 2015 with the implementation of the Governor of California's Drought Regulation, mandating a 20% reduction in all water use. Along with the reductions in 2015, the SCWC Board of Directors continued to reduce water allotments as water levels and production began and continued to fall. The SCWC Board of Directors also implemented a Tiered water rate structure to reduce additional water use over Shareholders allotment.

SCWC began taking action to alleviate the source capacity issues with the approval of Well #11, to be located outside of the company's exiting well field and drilled within the Alto Sub Basin located within the Mojave Water Agencies Boundaries. CEQA was completed in early 2018 and the well was drilled and completed by fall 2018. The SWRCB approved the well into the system in November 2018 after the Source Capacity Violation was issued. The increased capacity of .36 MGD combined with the lowest capacity of .72 MGD brings the total pumping capacity of SCWC to 1.08 MGD leaving a deficit of .70 MGD. The 1.08 MGD does not take into account the regulation of the highest producing source being taken offline.

With the recommendation from the required feasibility study that was completed by IEC, up to four additional wells will need to be drilled within the SCWC water district. The assumption of four wells is based on the recently completed SCWC Well #11. Well #11 was drilled to a depth of 1,500 feet with a production of 250 GPM at a water level of approximately 950 feet below ground surface. Following approval from the SCWC Shareholders to move forward, the Board of Directors will begin the process for the installation of the first well (Well #12) in the project. SCWC will continue to drill the additional wells as needed to produce the additional .70 MGD. With the assumption that the additional wells produce .36 MGD as Well #11, a total of three wells may need to be drilled to meet the SWRCB regulation for a water systems MDD.

SCWC will locate the new wells within the best location of existing pipeline infrastructure. With locating the wells within areas of the water system that have larger diameter pipelines, this will reduce the infrastructure needed to connect the wells to the system along with reducing the cost to the Shareholders. As of this time, the cost, construction, water production and water quality for all additional wells are being based on the newly completed Well #11. Water quality is unknown and is not taken into account in the proposed timeline. Water quality will be addressed if necessary following the completion of title 22 water quality sampling.

With Shareholder approval to drill additional wells, the following will be completed for compliance:

- Continue working with CRWA for funding of new wells and possible infrastructure upgrades
- CEQA compliance for each well project needed
 - o If possible, projects to be combined
- Installation of Well #12 & 13
 - o Drill well with estimated depth of 1,500 feet
 - o 12 16 inch diameter casing with estimated 500 foot louvered section
 - o Test pump well with estimated production of 250 GPM or .36 MGD
 - o Application for Southern California Edison- Electrical Service
 - o Installation of pumping equipment
 - O Well head pipe work
 - o Onsite and offsite pipe work to connect to water system- Estimated distance 500 feet
 - o Installation of electrical equipment and SCE service
- Installation of Well #14 & 15 (If Necessary for Compliance)
 - o Drill well with estimated depth of 1,500 feet
 - o 12 16 inch diameter casing with estimated 500 foot louvered section
 - o Test pump well with estimated production of 250 GPM or .36 MGD
 - o Application for Southern California Edison- Electrical Service
 - o Installation of pumping equipment
 - o Well head pipe work
 - o Onsite and offsite pipe work to connect to water system- Estimated distance 2800 feet
 - o Installation of electrical equipment and SCE service

Funding SCWC has been working with the California Rural Water Association (CRWA) for two years to acquire grant funding to bring SCWC into compliance and complete additional projects within the water district. SCWC will continue to work with CRWA to seek funding from SWRCB-DFA for

completion of the additional wells as recommend in the Final Engineering Report that was submitted in July 2019.

SCWC is working with a funding consultant, Waterfunder LLC, for private funding along with possible additional grant funding that may be available. The options for payment of the loans will be put to the Shareholders to vote on payment options.

Estimated cost per well is based on similar design as Well #11:

- \$900,000 per well with pipeline & electrical installation
 - o Estimated cost per share per well for loan repayment- \$150 per share
 - Estimated cost is based on 10 year loan with assessment collection cost
 - Estimated cost per service connection per month per well for loan repayment-\$8.00 per service-\$960 per meter service
 - Estimated cost is based on 10 year loan with interest
- Upon approval by the SWRCB-DDW, as additional source capacity becomes available, SCWC
 can begin issuing new service connections with the additional funds to be available for the wells
 or any outstanding loans lowering the cost to the existing water users and Shareholders.

Timeline for Compliance With approval of the SCWC Shareholders to move forward with drilling additional wells within the SCWC water system, staff will begin moving forward with well locations for the additional wells. The plan is to work on the first two wells concurrently if possible to cut time on the project. Following approval of locations from the Board of Directors, CEQA documents will be completed and submitted. During the CEQA process, property acquisition will be completed, necessary permitting will begin and Bids will be submitted for well drilling. Following completion of test pumping, SCE application will be made, pumping equipment installed, on and off site pipe work will be completed concurrently. Documentation will be submitted to SWRCB-DDW for approval of a new water source.

Estimated Project Timeline

ID T	ask Name	Duration	Estimated Start Date	Estimated Completion Date
1.	Project		September 2019	June 2023
2.	Funding, Applications & Approvals		September 2020	
3.	Well Site Location & Acquisition		January 2020	
4.	CEQA Wells 12 & 13			October 2020
	a. Initial Study	3 months		
	b. Lead Agency Submittal	2 months		
	c. Review & Comment Period	30 days		
	d. Mitigation	4 Months		
5.	Engineering & Permitting	4 months		
6.	Bid Project/Award Contract	60 days		November 2020
7.	Well No 12		January 2021	

8.	Drill, Case, Test Well	60 days		
9.	Well Site Acquisition- Well 14 & 15	3 Months		
-	CEQA Wells 14 & 15 (see Item 4 a-d)	10 months		
	Construct Well Site and Offsite Pipeline			
	Equipment Lead Time	60 days		
	SCE Application for Service	6 months		
	County Permit	30 days		
	DDW Permit	45 days		
	Well 12 Complete	0 days		December 2021
	Well No 13	o auys	June 2021	Detember 2021
	Drill, Case, Test Well	60 days	30110 2021	
	Construct Well Site and Offsite Pipeline			
	Equipment Lead Time	60 days		
	SCE Application for Service	6 months		
	County Permit	30 days		
	DDW Permit	45 days		
	Well 13 Complete	0 days		May 2022
	•	•		•
25.	Well No 14- If Necessary		January 2022	
	Well No 14- If Necessary Drill, Case, Test Well	60 days	January 2022	
26.	•	•	January 2022	
26. 27.	Drill, Case, Test Well	•	January 2022	
26. 27. 28.	Drill, Case, Test Well Construct Well Site and Offsite Pipeline	90 days	January 2022	
26. 27. 28. 29.	Drill, Case, Test Well Construct Well Site and Offsite Pipeline Equipment Lead Time	90 days 60 days	January 2022	
26. 27. 28. 29. 30.	Drill, Case, Test Well Construct Well Site and Offsite Pipeline Equipment Lead Time SCE Application for Service	90 days 60 days 6 months	January 2022	
26. 27. 28. 29. 30. 31.	Drill, Case, Test Well Construct Well Site and Offsite Pipeline Equipment Lead Time SCE Application for Service County Permit	90 days 60 days 6 months 30 days	January 2022	December 2022
26. 27. 28. 29. 30. 31.	Drill, Case, Test Well Construct Well Site and Offsite Pipeline Equipment Lead Time SCE Application for Service County Permit DDW Permit	90 days 60 days 6 months 30 days 45 days	January 2022 June 2022	December 2022
26. 27. 28. 29. 30. 31. 32.	Drill, Case, Test Well Construct Well Site and Offsite Pipeline Equipment Lead Time SCE Application for Service County Permit DDW Permit Well 14 Complete	90 days 60 days 6 months 30 days 45 days		December 2022
26. 27. 28. 29. 30. 31. 32. 33.	Drill, Case, Test Well Construct Well Site and Offsite Pipeline Equipment Lead Time SCE Application for Service County Permit DDW Permit Well 14 Complete Well No 15- If Necessary	90 days 60 days 6 months 30 days 45 days 0 days		December 2022
26. 27. 28. 29. 30. 31. 32. 33. 34.	Drill, Case, Test Well Construct Well Site and Offsite Pipeline Equipment Lead Time SCE Application for Service County Permit DDW Permit Well 14 Complete Well No 15- If Necessary Drill, Case, Test Well	90 days 60 days 6 months 30 days 45 days 0 days		December 2022
26. 27. 28. 29. 30. 31. 32. 33. 34. 35.	Drill, Case, Test Well Construct Well Site and Offsite Pipeline Equipment Lead Time SCE Application for Service County Permit DDW Permit Well 14 Complete Well No 15- If Necessary Drill, Case, Test Well Construct Well Site and Offsite Pipeline	90 days 60 days 6 months 30 days 45 days 0 days 60 days 90 days		December 2022
26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36.	Drill, Case, Test Well Construct Well Site and Offsite Pipeline Equipment Lead Time SCE Application for Service County Permit DDW Permit Well 14 Complete Well No 15- If Necessary Drill, Case, Test Well Construct Well Site and Offsite Pipeline Equipment Lead Time	90 days 60 days 6 months 30 days 45 days 0 days 60 days 90 days		December 2022
26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37.	Drill, Case, Test Well Construct Well Site and Offsite Pipeline Equipment Lead Time SCE Application for Service County Permit DDW Permit Well 14 Complete Well No 15- If Necessary Drill, Case, Test Well Construct Well Site and Offsite Pipeline Equipment Lead Time SCE Application for Service	90 days 60 days 6 months 30 days 45 days 0 days 60 days 90 days 60 days 6 months		December 2022
26. 27. 28. 29. 31. 32. 33. 34. 35. 36. 37. 38.	Drill, Case, Test Well Construct Well Site and Offsite Pipeline Equipment Lead Time SCE Application for Service County Permit DDW Permit Well 14 Complete Well No 15- If Necessary Drill, Case, Test Well Construct Well Site and Offsite Pipeline Equipment Lead Time SCE Application for Service County Permit	90 days 60 days 6 months 30 days 45 days 0 days 60 days 90 days 60 days 60 days 60 days		December 2022 May 2023
26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39.	Drill, Case, Test Well Construct Well Site and Offsite Pipeline Equipment Lead Time SCE Application for Service County Permit DDW Permit Well 14 Complete Well No 15- If Necessary Drill, Case, Test Well Construct Well Site and Offsite Pipeline Equipment Lead Time SCE Application for Service County Permit DDW Permit	90 days 60 days 6 months 30 days 45 days 0 days 60 days 90 days 60 days 6 months 30 days 45 days		

Appendix 3

Financial Assessment Questionnaire for Disadvantaged Medium/Large Community Water Systems

Financial Assessment Questionnaire for Disadvantaged Medium/Large CWS

Asset Management

- 1) Do you have as-built drawings and maps of all water system facilities showing the locations of each water source, treatment facilities, pumping plant(s), storage tanks, water mains, isolation valves, etc.? Choose an item. When were the schematic drawings and maps last updated? Click or tap to enter a date.
- 2) Do you have an asset inventory? Choose an item.
- 3) Do you evaluate assets for their condition and/or criticality of repair, rehabilitation, or replacement? Choose an item. What is the date of the last evaluation? Click or tap to enter a date.
- 4) Do you have an asset management plan? Choose an item. What is the date of the plan? Click or tap to enter a date.

Strategic Plans - Master Plan / Capital Improvement Plan / Facility Replacement and Refurbishment Plan

- 5) Do you have a Master Plan (MP), Capital Improvement Plan (CIP), or another strategic plan? Choose an item. What is the date of the last update? Click or tap to enter a date.
- 6) What percent of your annual budget is allocated to CIP reserve? Choose an item. How often is the CIP Reserve funded? Choose an item. Is the annual amount funded to the CIP reserve equal to or greater than the amount of depreciation of system assets? Choose an item.

Reserves Management

- 7) Do you maintain separate reserve funds? Choose an item. If so, do you have the following types of reserve funds:
 - a. Debt Choose an item. What percent of your budget is deposited annually? Choose an item.
 - b. Operations Choose an item. What percent of your budget is deposited annually? Choose an item.
 - c. Emergency Choose an item. What percent of your budget is deposited annually? Choose an item.
 - d. Capital Choose an item. What percent of your budget is deposited annually? Choose an item.
- 8) Are there specific deposit and withdrawal policies or guidelines for the reserve accounts? Choose an item.
- 9) Do you have mutual aid arrangements in place? Choose an item.
 - a. Do you have a funding mechanism in place to support mutual aid requests? Choose an item.

Debt Management

- 10) Do you have any outstanding private, State, or Federal loans related to the water system? Choose an item. If so, what is the date of final debt payout? Click or tap to enter a date. Is the water system delinquent or in default on any debt(s)? Choose an item.
- 11) Are all the necessary debt reserve requirements met? Choose an item.
- 12) Is the water system utilizing long-term debt to finance operations? Choose an item.

Financial Budgeting

- 13) Is your drinking water system budget maintained separately from other utility or service budgets? Choose an item
- 14) Does your drinking water system prepare an annual budget document for the upcoming year's operating plan, clearly identifying the projected revenue? Choose an item. Is this budget adopted before the beginning of the fiscal year? Choose an item.

Financial Planning

- 15) Have revenues been sufficient to cover expenses for the past three years? Choose an item.
 - a. Are total revenues sufficient to cover total expenses (including the debt payment, CIP upgrades, and the costs of emergency maintenance)? Choose an item.
 - b. Are rates high enough to meet short term and long-term needs? Choose an item.
 - c. Is there a formal growth-pays-for-growth policy and is it reflected in the rate structure? Choose an item.
 - d. When was the last rate increase? Click or tap to enter a date.
 - e. When were water rates last evaluated? Click or tap to enter a date.
- 16) What percentage of customers do not pay their bill? Choose an item. Is non-payment absorbed into the budget? Choose an item. Are there reserves maintained to make-up for customer non-payment? Choose an item.

Financial Accounting

- 17) Does the water system have formal accounting systems and written procedures for financial records? Choose an item.
- 18) Who records financial transactions? Choose an item. Who approves financial transactions? Choose an item.
- 19) How often are bank statements reconciled against the water system's accounting records? Choose an item. Who performs the reconciliation? Choose an item.

Financial Reporting

20) Are financial reports/standard financial statements prepared for review by the governing board/auditor? Choose an item. How often? Choose an item. Are these reports and standards routinely made available to system customers? Choose an item.

Board Members Training

21) Have board members received training on financial budgeting and obligations, if applicable? Choose an item.

Appendix 4

Source Capacity Evaluation

	10-year (2009 to 2018) MDD Sou	rce Capac	ity Evalu	ation for	Sheep Cr	eek Wate	r Compa	ny (3610:	109)	
	Parameter:	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	Max Day (MG)	1.83	1.68	1.9	1.78	1.76	1.97	1.14	1.54	1.06	1.09
Production	Date	Aug-12th	Jul-25th	Jun-6th	Aug-26th	Jul-13th	Jul-4th	Aug-8th	June-30th	June-30th	May-8th
ğ	Max Month (MG)	36.35		35.05	39.15	38.96	39.81	29.49	35.7	25.49	22.71
ě	Date	Aug.	July	July	August	July	July	August	August	August	August
۵.	Annual (MG)	279.21	264.84	270.34	304.3	333.38	330.16	260.24	252.51	223.5	197.99
	Max Day (MG)	0	0	0	0	0	0	0	0	0	0
Purchased	Date	-	-	-			•	-		-	-
cha	Max Month (MG)	0	0	0	0	0.08	0	0	4.06	0	5.52
Ē	Date	-	-	-	-		-			-	-
	Annual (MG)	0	0	0	0	0.08	0	0	4.64	0	5.52
	Max Day (MG)	0.6	0	0	0	0	0	0	0	0	0
_	Date	Aug-11th	-	•				-			-
Sold	Max Month (MG)	2.6	0	0	0	0.92	0	0.25	0	0	0
٠,	Date	August	-	-		June				-	
	Annual (MG)	2.6	0	0	0	0.92	0	0.41	0	0	0
as sign	Max Day Demand (MDD)	1.23	1.68	1.9	1.78	1.76	1.97	1.14	1.54	1.06	1.09
Daily Bask	Avg. Hr Flow	0.05	0.07	0.08	0.07	0.07	0.08	0.05	0.06	0.04	0.05
Ē	PHD = Avg. Hr x 1.5	0.08	0.11	0.12	0.11	0.11	0.12	0.07	0.10	0.07	0.07
Sis	Annual Demand	276.61	264.84	270.34	304.3	332.54	330.16	259.83	257.15	223.5	203.51
g	Avg. Daily Usage	0.76	0.73	0.74	0.83	0.91	0.90	0.71	0.70	0.61	0.56
Yearly Basis	MDD = Avg. Daily*2.25(MDD)	1.71	1.63	1.67	1.88	2.05	2.04	1.60	1.59	1.38	1.25
ě	Peak Hourly Demand (PHD)	0.11	0.10	0.10	0.12	0.13	0.13	0.10	0.10	0.09	0.08

DEMAND:		AND THE STATE OF T
Maximum Day Demand (MDD)	1.97 MG	Production+Purchased-Sold= Demand
		Based on Year Basis

Lowest 10-year MDD:

1.06 MG

PRODUCTION: Source Capacity (gpm) Comments Well 2A 30 Based on July 2018 production records and Well 11 pump test from November 2018 Well 3A 25 Well 4A 60 Well 5 124 Well 8 141 Well 11 251 Tunnel 122 **Active Interconnections Emergency Interconnections** Phelan Pinon Hills CSD (3610120) excluded from calculations, not permitted as a permanent interconnection Surface Water None **Production Summary**

Sources 753 Interties 0 Total 753 gpm 1.08 MGD

ANALYSIS: Value Units Comments **Total Source Capacity** 1.08 MGD Net Interconnections+GW+SW **Total Storage Capacity 6.12** MGD

Maximum Daily Demand (Section 64554)

Maximum Daily Demard (MDD) 1.97 MGD 1368 gpm Is Source Capacity alone>MDD? NO **Does Source Capacity meet** lowest 10-year MDD? YES

Additional source capacity required to meet highest MDD

MGD

Peak Hourly Demand (Section 64554) MG/hr 0.12 4 hours PHD 0.49 MG 0.05 Source Capacity MG/hr Storage Capacity 0.13 MG/hr Assume: 50% of storage will be available during PHD MG/hr **Emergency Connections** Sum of Storage & Sources 0.17 MG/hr 4 hrs of Storage, & Sources 0.69 MG Is Sum of Storage & Sources >PHD? YES

Reliability of Source Capacity

Can MDD be met with highest source offline?

NO

Appendix 5

Quarterly Progress Report

APPENDIX 5: QUARTERLY PROGRESS REPORT

Water System: Sheep Creek Water Compa	y Water System No: 3610109
Compliance Order No: 05_13_18R_002A1	Violation: Source Capacity
Calendar Quarter:	Date:
rectives of the Compliance Order and the ecessary. The quarterly progress report mu	ystem personnel with appropriate authority to implement Corrective Action Plan. Please attach additional shee st be submitted by the 10th day of each subsequent qu ffice to the following email address: 464 W 4th Street, F
ummary of Compliance Plan:	
asks completed in the reporting quarter:	
asks remaining to complete:	
Anticipated compliance date:	

Date

Title

Appendix 6

Notification of Receipt Form

APPENDIX 6 - NOTIFICATION OF RECEIPT

Compliance Order Number: 05_13_18R_002A1

Name of Water System: Sheep Creek Water Company

System Number: 3610109

Certification

I certify that I am an authorized representative of the Shee	p Creek Water Company and that Compliance
Order No. 05_13_18R_002A1 was received on	Further, I certify that the Order
has been reviewed by the appropriate management staff	of the Sheep Creek Water Company and it is
clearly understood that Compliance Order No. 05_13_18R	_002A1 contains legally enforceable directives
with specific due dates.	
Signature of Water System Representative	Date

THIS FORM MUST BE COMPLETED AND RETURNED TO THE STATE WATER BOARD, DIVISION OF DRINKING WATER, NO LATER THAN April 17, 2020

Disclosure: Be advised that the California Health and Safety Code, Sections 116725 and 116730 state that any person who knowingly makes any false statement on any report or document submitted for the purpose of compliance with the Safe Drinking Water Act may be liable for, respectively, a civil penalty not to exceed five thousand dollars (\$5,000) for each separate violation or, for continuing violations, for each day that violation continues, or be punished by a fine of not more than \$25,000 for each day of violation, or by imprisonment in the county jail not to exceed one year, or by both the fine and imprisonment.

Compliance Order No. 05_13_18R_002





State Water Resources Control Board

Division of Drinking Water

August 30, 2018

System No. 3610109

Chris Cummings, General Manager Sheep Creek Water Company P.O. Box 291820 Phelan, CA 92329

COMPLIANCE ORDER NO.05-13-18R-002 SOURCE CAPACITY VIOLATION

Enclosed is Compliance Order No.05-13-18R-002 (hereinafter "Order"), issued to the Sheep Creek Water Company public water system (hereinafter "System"), public water system. Please note there are legally enforceable deadlines associated with this Order.

The System will be billed at the State Water Resources Control Board's (hereinafter "State Water Board"), hourly rate for the time spent on issuing this Order. California Health and Safety Code (hereinafter "CHSC"), Section 116577, provides that a public water system must reimburse the State Water Board for actual costs incurred by the State Water Board for specified enforcement actions, including but not limited to, preparing, issuing and monitoring compliance with an order. At this time, the State Water Board has spent approximately 2 hour(s) on enforcement activities associated with this violation.

The System 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 System for the current fiscal year.

Any person who is aggrieved by a citation, order or decision issued <u>under authority delegated to an officer or employee of the state board</u> under Article 8 (commencing with CHSC, Section 116625) or Article 9 (commencing with CHSC, Section 116650), of the Safe Drinking Water Act (CHSC, Division 104, Part 12, Chapter 4), may file a petition with the State Water Board for reconsideration of the citation, order or decision. Appendix 1 to the enclosed Citation contains the relevant statutory provisions for filing a petition for reconsideration (CHSC, Section 116701).

Petitions must be received by the State Water Board within 30 days of the issuance of the citation, order or decision by the officer or employee of the state board. The date of issuance is the date when the Division of Drinking Water mails a copy of the citation, order or decision. If the 30th day

FELICIA MARCUS, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

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:

http://www.waterboards.ca.gov/drinking_water/programs/petitions/index.shtml

If you have any questions regarding this matter, please contact Hector Cazares of my staff at (909) 383-4312 or me at (909) 383-4328.

Sincerely,

Eric J. Zúñiga, P.E. District Engineer

San Bernardino District

Southern California Field Operations Branch

Enclosures

Certified Mail No. 7017 0660 0001 1704 7559

cc: Joy Chakma, San Bernardino County EHS, via email at Joy.Chakma@dph.sbcounty.gov
Diana Almond, San Bernardino County EHS via email at Diana.Almond@dph.sbcounty.gov

1	Compliance Order No. 05-13-18R-002
2	
3	STATE OF CALIFORNIA
4	STATE WATER RESOURCES CONTROL BOARD
5	DIVISION OF DRINKING WATER
6	
7	Name of Public Water System: Sheep Creek Water Company
8	Water System No: 3610109
9	
10	Attention: Chris Cummings, General Manager
11	P.O. Box 291820
12	Phelan, CA 92329
13	
14	issued: August 30, 2018
15	
16	COMPLIANCE ORDER FOR VIOLATION OF CALIFORNIA HEALTH AND SAFETY
17	CODE SECTION 116555(a)(3) AND
18	CALIFORNIA CODE OF REGULATIONS, TITLE 22, SECTION 64554
19	
20	SOURCE CAPACITY VIOLATION
21	2018
22	
23	The California Health and Safety Code (hereinafter "CHSC"), Section 116655 authorizes
24	the State Water Resources Control Board (hereinafter "State Water Board"), to issue a
25	compliance order to a public water system when the State Water Board determines tha
26	the public water system has violated or is violating the California Safe Drinking Wate
27	Act (hereinafter "California SDWA"), (CHSC, Division 104, Part 12, Chapter 4

commencing with Section 116270), or any regulation, standard, permit, or order issued or adopted thereunder.

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The State Water Board, acting by and through its Division of Drinking Water (hereinafter "Division"), and the Deputy Director for the Division, hereby issues Compliance Order No.05-13-18R-002 (hereinafter "Order") pursuant to Section 116655 of the CHSC to the Sheep Creek Water Company (hereinafter "System"), for violation of CHSC, Section 116555(a)(3), requiring a reliable and adequate supply of pure, wholesome, healthful, and potable water, and California Code of Regulations (hereinafter "CCR"), Title 22. Section 64554, setting source capacity requirements.

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A copy of the applicable statutes and regulations are included in Appendix 1, which is attached hereto and incorporated by reference.

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STATEMENT OF FACTS

The System is classified as a community public water system with a population of 3,354 16 17

serving 1,183 connections. The System operates under Domestic Water Supply Permit No. 78-007 issued by the State Water Board on February 9, 1978.

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The System relies on five (5) groundwater wells: Wells 2A, 3A, 4A, 5, 8 and one (1) tunnel source which is also classified as groundwater. The System submitted production yield records to the Division on August 1, 2018, which demonstrated a significant decrease in the capacity of all sources over the past ten (10) years.

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Based on the most recent ten (10) years of production data, the System reported the highest MDD as 2,090,000 gallons per day in 2014. The lowest MDD was reported by the System in 2017 as 1,060,000 gallons per day. In accordance with California Code of Regulations, Title 22, Section 64554(a), a public water system must at all times have adequate source capacity to meet the highest 10-year MDD, which here would be 2,090,000 gallons from 2014. Using the System's most current production yield records from July 2018, the System is producing a combined source flow of 720,000 gallons per day, and therefore does not meet the maximum day demand (MDD) requirements. Summaries of production data, system demand data, and a source capacity evaluation were used to determine compliance with source capacity requirements and are included in Appendix 4.

A water exchange agreement was signed on July 31, 2018 for an emergency interconnection for the System with Phelan Pinon Hills CSD (hereinafter "CSD"). Because the agreement between the System and the CSD does not specify a minimum flow that will be provided to the System and the water flow is intended to be used for emergencies, the water flow from the interconnection cannot be considered when calculating the System's compliance with source capacity MDD requirements.

On August 22, 2018 the System notified the Division of an impending water production shortage. The System reported that on August 10, 2018 they began to receive water from the CSD through their interconnection. After notifying the Division of the impending water shortage, the System stated that they will continue relying on water purchased from the CSD. The notification sent to the Division has been attached to this Order as Appendix 4.

CHSC, Section 116555(a)(3) requires all public water systems to provide a reliable and adequate supply of pure, wholesome, healthful, and potable water and CCR, Title 22, Section 64554(a) requires that public water systems shall at all times have the capacity to meet the System's maximum day demand (MDD) as established by Section 64554 subsection (b).

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DETERMINATION

Based on the above Statement of Facts, the State Water Board has determined that without additional source capacity, the System may not be able to provide an adequate and reliable supply of water to its customers and has failed to comply with requirements from CHSC, Section 116555(a)(3) and CCR, Title 22, Section 64554. The Division has the authority under Sections 116655 (a)(2) and 116655 (b)(4) of the CHSC to take steps necessary to prevent increasing water demands for the System until such time that an adequate and proven source capacity is provided.

DIRECTIVES

To ensure that the water supplied by the System is at all times reliable and adequate, the System is hereby directed to take the following actions:

- 1. Effective immediately, upon receipt of this Order, the Division imposes a service connection moratorium on the System and directs the System to not make any additional service connections to its water system, including any such service connections for which a "will serve" letter was issued at any time by the System, but for which a building permit was not issued prior to the date of this Order. As used in this Order, "will serve" letter means any form of notice, representation or agreement that the System will supply water to a property, parcel or structure.
- 2. By September 20, 2018, the System must identify any and all properties for which "will serve" letters have been issued, but a service connection has not been made.
- 3. By September 20, 2018, the System must advise the owner(s) of those properties that were issued will serve letters, and all appropriate local planning agencies that the "will serve" letter issued for such property is null and void and may not be relied upon for any purpose.

- 4. By September 28, 2018, the System must provide to the Division the following documents:
 - a) Copies of all "will serve" letters issued by the System at any time for which a service connection has not been made, including the address(es) or parcel number(s) of the respective property(ies);
 - b) A list of properties that were provided "will serve" letters and have a building permit(s) by the date of this order, including the address(es) or parcel number(s) of the respective property(ies);
 - c) a list of the property owners and applicable planning agencies it notified that
 its "will serve" letters are null and void along with a certification that the
 required notification was completed by the System; and
 - d) a current list of all service connections, including the address of each.
- 5. On or before **November 20, 2018**, the System must submit to the Division a completed feasibility study that must review the proposed options for meeting the System's water demand requirements. The Study must include consolidation with nearby public water systems as an option. The feasibility study must discuss cost estimates, including the operation and maintenance (O&M) costs, and the potential environmental impacts of each of the options considered. The report should identify a preferred alternative and include discussion on the reliability of the selected preferred alternative, and an explanation for why the other options were rejected.
 - 6. After Division approval of the preferred alternative, prepare for Division approval a Corrective Action Plan, identifying how it will implement the preferred alternative to ensure that the System delivers an adequate and reliable water supply to its consumers and addresses the System's demand requirements. The plan must

include a time schedule for completion of each of the phases of the project, such as design, financing, environmental review, construction, and startup, and a date as of which the System will be in compliance with source capacity requirements, which must be no later than **May 31, 2019**, unless the System is able to demonstrate why a later compliance date is necessary.

- On or before December 20, 2018, submit the Corrective Action Plan required under Directive No. 6 above, to the State Water Board's office located at 464 W.
 4th Street, Room 437 San Bernardino, CA 92401.
- 8. Perform 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. On or before December 20, 2018 and every three months thereafter, submit a report to the State Water Board in the form provided as Appendix 2 showing actions taken during the previous quarter (calendar three months) to comply with the Corrective Action Plan.
- 10. On or before September 20, 2018 complete and return to the State Water Board the "Notification of Receipt" form attached to this Order as Appendix 3. Completion of this form confirms that the System has received this Order and understands that it contains legally enforceable directives with due dates.

All submittals required by this Order, with exception of analytical results, must be electronically submitted to the State Water Board at the following address. The subject line for all electronic submittals corresponding to this Order must include the following information: Water System name and number, compliance order number and title of the document being submitted.

Eric J. Zúñiga, District Engineer

Dwpdist13@waterboards.ca.gov

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

Nothing in this Order relieves the System of its obligation to meet the requirements of the California SDWA (CHSC, Division 104, Part 12, Chapter 4, commencing with Section 116270), or any regulation, standard, permit or order issued or adopted thereunder.

PARTIES BOUND

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

SEVERABILITY

The directives of this Order are severable, and the System shall comply with each and every provision thereof notwithstanding the effectiveness of any provision.

FURTHER ENFORCEMENT ACTION

The California SDWA authorizes the State Water Board to issue a citation or order 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 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, or to petition

the superior court to take various measures against a public water system that has failed to comply with an order of the State Water Board, including issuance of an injunction to enforce a compliance plan, enjoining further service connections, or any other relief that may be required to ensure compliance with the SDWA and applicable regulations. The State Water Board does not waive any further enforcement action by issuance of this Order. **RIGHT TO PETITION** CHSC section 116701(a) provides that any person aggrieved by this order may, within 30 days of the date of this order, petition the State Board for reconsideration. See Appendix 1 for section 116701(b), which sets out the requirements for a petition. Chief, South Coast Section Southern California Field Operations Branch Appendices [5]: 1. Applicable Statutes and Regulations 2. Quarterly Progress Report 3. Source Capacity Evaluation 4. Notification of impending water shortage from System to Division 5. Notification of Receipt Form

Certified Mail No. 7017 0660 0001 1704 7559

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APPENDIX 1. APPLICABLE STATUTES AND REGULATIONS FOR Compliance Order No.05-13-18R-002 Source Capacity Violation

NOTE: The following language is provided for the convenience of the recipient, and cannot be relied upon as the State of California's representation of the law. The published codes are the only official representation of the law. Regulations related to drinking water are in Titles 22 and 17 of the California Code of Regulations. Statutes related to drinking water are in the Health & Safety Code, the Water Code, and other codes.

California Health and Safety Code (CHSC):

Section 116271. Transition of CDPH duties to State Board states in relevant part:

- (a) The state board succeeds to and is vested with all of the authority, duties, powers, purposes, functions, responsibilities, and jurisdiction of the State Department of Public Health, its predecessors, and its director for purposes of all of the following:
 - (1) The Environmental Laboratory Accreditation Act (Article 3 (commencing with Section 100825) of Chapter 4 of Part 1 of Division 101).
 - (2) Article 3 (commencing with Section 106875) of Chapter 4 of Part 1.
 - (3) Article 1 (commencing with Section 115825) of Chapter 5 of Part 10.
 - (4) This chapter and the Safe Drinking Water State Revolving Fund Law of 1997 (Chapter 4.5 (commencing with Section 116760)).
 - (5) Article 2 (commencing with Section 116800), Article 3 (commencing with Section 116825), and Article 4 (commencing with Section 116875) of Chapter 5.
 - (6) Chapter 7 (commencing with Section 116975).
 - (7) The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Division 43 (commencing with Section 75001) of the Public Resources Code).
 - (8) The Water Recycling Law (Chapter 7 (commencing with Section 13500) of Division 7 of the Water Code).
 - (9) Chapter 7.3 (commencing with Section 13560) of Division 7 of the Water Code.
 - (10) The California Safe Drinking Water Bond Law of 1976 (Chapter 10.5 (commencing with Section 13850) of Division 7 of the Water Code).
 - (11) Wholesale Regional Water System Security and Reliability Act (Division 20.5 (commencing with Section 73500) of the Water Code).
 - (12) Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002 (Division 26.5 (commencing with Section 79500) of the Water Code).
- (b) The state board shall maintain a drinking water program and carry out the duties, responsibilities, and functions described in this section. Statutory reference to "department," "state department," or "director" regarding a function transferred to the state board shall refer to the state board. This section does not impair the authority of a local health officer to enforce this chapter or a county's election not to enforce this chapter, as provided in Section 116500...
 - (k)
- (1) The state board shall appoint a deputy director who reports to the executive director to oversee the issuance and enforcement of public water system permits and other duties as appropriate. The deputy director shall have public health expertise.
- (2) The deputy director is delegated the state board's authority to provide notice, approve notice content, approve emergency notification plans, and take other action pursuant to Article 5 (commencing with Section 116450), to issue, renew, reissue, revise, amend, or deny any public water system permits pursuant to Article 7 (commencing with Section 116525), to suspend or revoke any public water system permit pursuant to Article 8 (commencing with Section 116625), and to issue citations, assess penalties, or issue orders pursuant to Article 9 (commencing with Section 116650). Decisions and actions of the deputy director taken pursuant to Article 5 (commencing with Section 116450) or Article 7 (commencing with Section 116525) are deemed decisions and actions taken by the state board, but are not subject to reconsideration by the state board except as provided in Section 116540. Decisions and actions of the deputy director taken pursuant to Article 8 (commencing with Section 116650) are deemed decisions and actions taken by the state board, but any aggrieved person may petition the state board for reconsideration of the decision or action. This subdivision is not a limitation on the state board's authority to delegate any other powers and duties.

Section 116555. Operational requirements states in relevant part:

- (a) Any person who owns a public water system shall ensure that the system does all of the following:
 - (1) Complies with primary and secondary drinking water standards.
 - (2) Will not be subject to backflow under normal operating conditions.
 - (3) Provides a reliable and adequate supply of pure, wholesome, healthful, and potable water.

Section 116577. Enforcement fee states:

- (a) Each public water system shall reimburse the state board for actual costs incurred by the state board for any of the following enforcement activities related to that water system:
 - (1) Preparing, issuing, and monitoring compliance with, an order or a citation.
 - (2) Preparing and issuing public notification.
 - (3) Conducting a hearing pursuant to Section 116625.
- (b) The state board shall submit an invoice for these enforcement costs to the public water system that requires payment before September 1 of the fiscal year following the fiscal year in which the costs were incurred. The invoice shall indicate the total hours expended, the reasons for the expenditure, and the hourly cost rate of the state board. The costs set forth in the invoice shall not exceed the total actual costs to the state board of enforcement activities specified in this section.
- (c) Notwithstanding the reimbursement of enforcement costs of the local primacy agency pursuant to subdivision (a) of Section 116595 by a public water system under the jurisdiction of the local primacy agency, a public water system shall also reimburse enforcement costs, if any, incurred by the state board pursuant to this section.
 - (d) "Enforcement costs," as used in this section, does not include "litigation costs" pursuant to Section 116585.
- (e) The state board shall not be entitled to enforcement costs pursuant to this section if a court determines that enforcement activities were in error.
- (f) Payment of the invoice shall be made within 90 days of the date of the invoice. Failure to pay the invoice within 90 days shall result in a 10-percent late penalty that shall be paid in addition to the invoiced amount.
- (g) The state board may, at its sole discretion, waive payment by a public water system of all or any part of the invoice or penalty.

Section 116625. Revocation and suspension of permits states:

- (a) The state board, after providing notice to the permittee and opportunity for a hearing, may suspend or revoke any permit issued pursuant to this chapter if the state board determines pursuant to the hearing that the permittee is not complying with the permit, this chapter, or any regulation, standard, or order issued or adopted thereunder, or that the permittee has made a false statement or representation on any application, record, or report maintained or submitted for purposes of compliance with this chapter. If the permittee does not request a hearing within the period specified in the notice, the state board may suspend or revoke the permit without a hearing. If the permittee submits a timely request for a hearing, the hearing shall be before the state board or a member of the state board, in accordance with Section 183 of the Water Code and the rules for adjudicative proceedings adopted under Section 185 of the Water Code. If the permit at issue has been temporarily suspended pursuant to subdivision (b), the notice shall be provided within 15 days of the effective date of the temporary suspension order. The commencement of the hearing under this subdivision shall be as soon as practicable, but no later than 60 days after the effective date of the temporary suspension order, unless the state board grants an extension of the 60 day period upon request of the permittee.
- (b) The state board may temporarily suspend any permit issued pursuant to this chapter before any hearing when the action is necessary to prevent an imminent or substantial danger to health. The state board shall notify the permittee of the temporary suspension and the effective date of the temporary suspension and, at the same time, notify the permittee that a hearing has been scheduled. The hearing shall be held as soon as possible, but not later than 15 days after the effective date of the temporary suspension unless the state board grants an extension of the 15 day period upon request of the permittee, and shall deal only with the issue of whether the temporary suspension shall remain in place pending a hearing under subdivision (a). The hearing shall be conducted under the rules for adjudicative proceedings adopted by the state board under Section 185 of the Water Code. The temporary suspension shall remain in effect until the hearing under this subdivision is completed and the state board has made a final determination on the temporary suspension, which shall be made within 15 days after the completion of the hearing unless the state board grants an extension of the 15 day period upon request of the permittee. If the determination is not transmitted within 15 days after the hearing is completed, or any extension of this period requested by the permittee, the temporary suspension shall be of no further effect. Dissolution of the temporary suspension does not deprive the state board of jurisdiction to proceed with a hearing on the merits under subdivision (a).

Section 116650. Citations states:

- (a) If the state board determines that a public water system is in violation of this chapter or any regulation, permit, standard, citation, or order issued or adopted thereunder, the state board may issue a citation to the public water system. The citation shall be served upon the public water system personally or by certified mail. Service shall be deemed effective as of the date of personal service or the date of receipt of the certified mail. If a person to whom a citation is directed refuses to accept delivery of the certified mail, the date of service shall be deemed to be the date of mailing.
- (b) Each citation shall be in writing and shall describe the nature of the violation or violations, including a reference to the statutory provision, standard, order, citation, permit, or regulation alleged to have been violated.
 - (c) A citation may specify a date for elimination or correction of the condition constituting the violation.
 - (d) A citation may include the assessment of a penalty as specified in subdivision (e).
- (e) The state board may 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.

Section 116655. Orders states:

- (a) Whenever the state board determines that any person has violated or is violating this chapter, or any order, permit, regulation, or standard issued or adopted pursuant to this chapter, the state board may issue an order doing any of the following:
 - (1) Directing compliance forthwith.
 - (2) Directing compliance in accordance with a time schedule set by the state board.
 - (3) Directing that appropriate preventive action be taken in the case of a threatened violation.
- (b) An order issued pursuant to this section may include, but shall not be limited to, any or all of the following requirements:
 - (1) That the existing plant, works, or system be repaired, altered, or added to.
 - (2) That purification or treatment works be installed.
 - (3) That the source of the water supply be changed.
 - (4) That no additional service connection be made to the system.
 - (5) That the water supply, the plant, or the system be monitored.
 - (8) That a report on the condition and operation of the plant, works, system, or water supply be submitted to the state board.

Section 116701. Petitions to Orders and Decisions states:

(A)

- (1) Within 30 days of Issuance of an order or decision under authority delegated to an officer or employee of the state board under Article 8 (commencing with Section 116625) or Article 9 (commencing with Section 116650), an aggrieved person may petition the state board for reconsideration.
- (2) Within 30 days of issuance of an order or decision under authority delegated to an officer or employee of the state board under Section 116540, the applicant may petition the state board for reconsideration.
- (3) Within 30 days of final action by an officer or employee of the state board acting under delegated authority, the owner of a laboratory that was the subject of the final action may petition the state board for reconsideration of any of the following actions:
 - (A) Denial of an application for certification or accreditation under Section 100855.
 - (B) Issuance of an order directing compliance under Section 100875.
 - (C) Issuance of a citation under Section 100880.
 - (D) Assessment of a penalty under subdivision (e) of Section 100880.
- (b) The petition 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 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.
- (c) The evidence before the state board shall consist of the record before the officer or employee who Issued the order or decision and any other relevant evidence that, in the judgment of the state board, should be considered to implement the policies of this chapter. The state board may, in its discretion, hold a hearing for receipt of additional evidence.
- (d) The state board may refuse to reconsider the order or decision if the petition fails to raise substantial issues that are appropriate for review, may deny the petition upon a determination that the issuance of the order or decision was appropriate and proper, may set aside or modify the order or decision, or take other appropriate action. The state board's action pursuant to this subdivision shall constitute the state board's completion of its reconsideration.
- (e) The state board, upon notice and hearing, if a hearing is held, may stay in whole or in part the effect of the order or decision subject to the petition for reconsideration.
- (f) If an order or decision is subject to reconsideration under this section, the filing of a petition for reconsideration is an administrative remedy that must be exhausted before filing a petition for writ of mandate under Section 100920.5 or 116700.

California Code of Regulations (CCR), Title 22:

Section 64554 New and Existing Source Capacity states:

- (a) At all times, a public water system's water source(s) shall have the capacity to meet the system's maximum day demand (MDD). MDD shall be determined pursuant to subsection (b).
- (1) For systems with 1,000 or more service connections, the system shall be able to meet four hours of peak hourly demand (PHD) with source capacity, storage capacity, and/or emergency source connections.
- (2) For systems with less than 1,000 service connections, the system shall have storage capacity equal to or greater than MDD, unless the system can demonstrate that it has an additional source of supply or has an emergency source connection that can meet the MDD requirement.
- (3) Both the MDD and PHD requirements shall be met in the system as a whole and in each individual pressure zone
- (b) A system shall estimate MDD and PHD for the water system as a whole (total source capacity and number of service connections) and for each pressure zone within the system (total water supply available from the water sources and interzonal transfers directly supplying the zone and number of service connections within the zone), as follows:

Compliance Order No. 05-13-18R-002

- (1) If daily water usage data are available, identify the day with the highest usage during the past ten years to obtain MDD; determine the average hourly flow during MDD and multiply by a peaking factor of at least 1.5 to obtain the PHD.
 - (2) If no daily water usage data are available and monthly water usage data are available:
- (A) Identify the month with the highest water usage (maximum month) during at least the most recent ten years of operation or, if the system has been operating for less than ten years, during its period of operation;
- (B) To calculate average daily usage during maximum month, divide the total water usage during the maximum month by the number of days in that month; and
- (C) To calculate the MDD, multiply the average daily usage by a peaking factor that is a minimum of 1.5; and
- (D) To calculate the PHD, determine the average hourly flow during MDD and multiply by a peaking factor that is a minimum of 1.5.
 - (3) If only annual water usage data are available:
- (A) Identify the year with the highest water usage during at least the most recent ten years of operation or, if the system has been operating for less than ten years, during its years of operation;
- (B) To calculate the average daily use, divide the total annual water usage for the year with the highest use by 385 days; and
 - (C) To calculate the MDD, multiply the average daily usage by a peaking factor of 2.25.
- (D) To calculate the PHD, determine the average hourly flow during MDD and multiply by a peaking factor that is a minimum of 1.5.
- (4) If no water usage data are available, utilize records from a system that is similar in size, elevation, climate, demography, residential property size, and metering to determine the average water usage per service connection. From the average water usage per service connection, calculate the average daily.

APPENDIX 2: QUARTERLY PROGRESS REPORT

Water System: Sheep Creek Water Company	Water System No: 3610109
Compliance Order No: 05-13-18R-002	Violation: Source Capacity
Calendar Quarter:	Date:
his form should be prepared and signed by System irectives of the Compliance Order and the Correct ecessary. The quarterly progress report must be so the Division of Drinking Water, District 13 Office to 37 San Bernardino, CA 92401.	ive Action Plan. Please attach additional sheets ubmitted by the 10th day of each subsequent qual
ummary of Compliance Plan:	
asks completed in the reporting quarter:	
asks remaining to complete:	
Anticipated compliance date:	
Printed Name	Signature

Date

Title

Sheep Creek Water Company

(System No. 3610109)

Production and Source Capacity Records January 2012- July 2018

	Parameter:	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	Max Day (MG)	n/a	1.83	1.68	1.9	1.78	1.76	2.09	1.14	1.54	1.06
. <u>6</u>	Date	Not	Aug-12th	Jul-25th	Jun-6th	Aug-26th	Jul-13th	Jul-4th	Aug-8th	June-30th	June-30th
Production	Max Month (MG)	Reported	36.35		35.05	39.15	38.96	39.81	29.49	35.7	25.49
ĕ	Date		Aug.	July	July	August	July	July	August	August	August
<u>a</u>	Annual (MG)		279.21	264.84	270.34	304.3	333.38	330.16	260.24	252.51	223.5
_	Max Day (MG)	n/a	0	0	0	0	0	0	0	0	0
Purchased	Date	Not		•					-	•	•
ã	Max Month (MG)	Reported	0	0	0	0	0.08	0	0	4.06	0
Ş	Date		•		•				•		-
-	Annual (MG)		0	0	0	0	0.08	0	0	4.64	0
	Max Day (MG)	n/a	0.6	0	0	0	0	0	0	0	0
_	Date	Not	Aug-11th				•				
Pios	Max Month (MG)	Reported	2.6	0	0	0	0.92	0	0.25	0	0
V1	Date		August				June	-	·		<u>.</u>
	Annual (MG)		2.6	0	0	0	0.92	0	0.41	0	0
- 4	Max Day Demand (MDD)	n/a	1.23	1.68	1.9	1.78	1.76	2.09	1.14	1.54	1.06
<u>\$</u>	Avg. Hr Flow		0.05	0.07	0.08	0.07	0.07	0.09	0.05	0.06	0.04
A A	PHD = Avg. Hr x 1.5		0.08	0.11	0.12	0.11	0.11	0.13	0.07	0.10	0.07
SS	Annual Demand	n/a	276.61	264.84	270.34	304.3	332.54	330.16	259.83	257.15	223.5
Yearly Basis	Avg. Daily Usage		0.76	0.73	0.74	0.83	0.91	0.90	0.71	0.70	0.61
Ę	MDD = Avg, Daily*2.25(MDD)		1.71	1.63	1.67	1.88	2.05	2.04	1.60	1.59	1.38
ĕ	Peak Hourly Demand (PHD)		0.11	0.10	0.10	0.12	0.13	0.13	0.10	0.10	0.09

DEMAND:	SERVICE COMPANY OF THE PARTY OF	Sale To Sale		ĺ
	Maximum Day Demand (MDD)	2.09 MG	Production+Purchased-Sold= Demand	
	-		Based on Year Basis	

Lowest 10-year MDD:

1.06 MG

PRODUCTION:		
Source	Capacity (gpm)	Comments
Well 2A	30	Based on July 2018 production records
Well 3A	25	
Well 4A	60	
Well 5	124	
Well 8	141	
Tunnel	122	
Active Interconnec	tions	
None		
Emergency Interco	nnections	
Phelan Pinon Hills (CSD (3610120)	excluded from calculations, not permitted as a permanent interconnection
Surface Water		
None		
Production Summa	агү	
Sources	502	
Interconne	0	
Total	502 gpm	
	0.72 MGD	

ANALYSIS:

Units Value Comments

Net Interconnections+GW+SW

0.72 MGD 6.12 MGD Total Source Capacity Total Storage Capacity

Maximum Daily Demand (Section 64554)

Maximum Dally Demand (MDD) 2.09 MGD 1451 gpm Is Source Capacity alone>MDD? NO

Does Source Capacity meet lowest 10-year MDD?

NO

Peak Hourly Demand (Section 64554)	Smile of the	VTS/19=14	
PHO	0.13	MG/hr	
4 hours PHD	0.52	MG	
		=	
Source Capacity	0.03	MG/hr	
Storage Capacity	0.13	MG/hr	Assume: 50% of storage will be available during PHD
Emergency Connections		MG/hr	
		_	
Sum of Storage & Sources	0.16	MG/hr	
4 hrs of Storage, & Sources	0.63	MG	
Is Sum of Storage & Sources >PHD?	YES]	
		_	

Rehability of Source Capacity

Can MDD be met with highest source offline?

NO

AVERAGE GALLONS PER MINUTE 7 YEAR RECAP

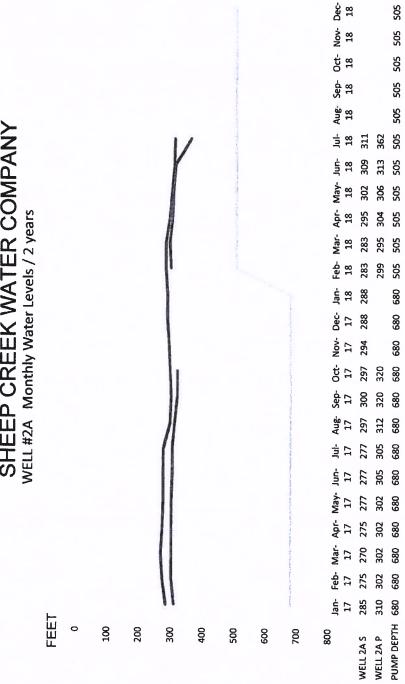
	-100% Compare 2017									Well Pulled 11-17																				:	Nov- Pump Pulled	92	Oct- Pump Pulled														
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AUG	-100%						c	28%	973	9	24	7	257	278	210,1	163	2 8	31	52	163	1	0	Z,	164	613	83	£ £	2.751		276	2	3 B	310	463	3,337		329	1,186	798	116	478	3,885		411	0 6	829	300
T T	-57%	Ź	R	X.	8	124	COS	7899	15	2 5	180	200	280	330	3	990	3 3	82	8	120	047	660	010	524	631	169	488	3 047		279	989	3 &	258	450	3,309		332	1,203	675	314	485	3,911		504	0	2 5	267
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700		n compared to 2013											1 compared to 2016	CONGRESS TO 2013											compared to 2013										CTCL to The Course																											
TOTAL STATE OF THE PARTY OF THE	3	Ar Area	118.39	13.08	6.11	13.67	114.53	104.50	0.00	370.28	tion= 3%		Reputeo	A.F. Repurcher	229.92	0.89	138.30	23.95	124.27	169.28	8	596.61	n= -32%		AF Reduction	269.98	7	67,02	2 2	22.53	2.07	16.28	/63.7/	%EZ- =U	A.F. Bestrator	245 54	141.61	1277	1.28	22.57	000	791 63			AF	453.74	132.74	74.39	16.47	104.39	00.0	75,792		1.4	543.76	289.23	36.22	102.77	9 9	0.00	07.00	
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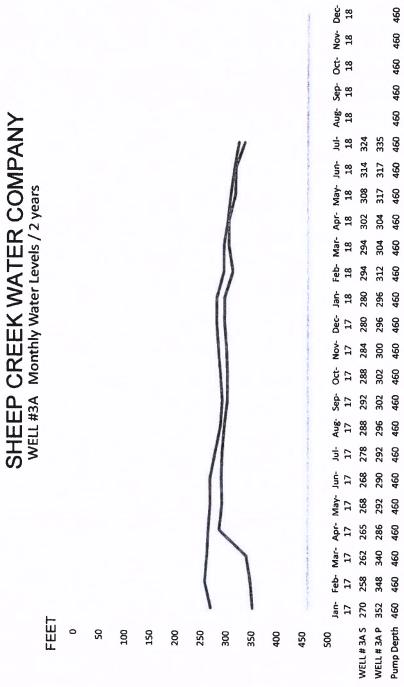
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SHEEP CREEK WATER COMPANY

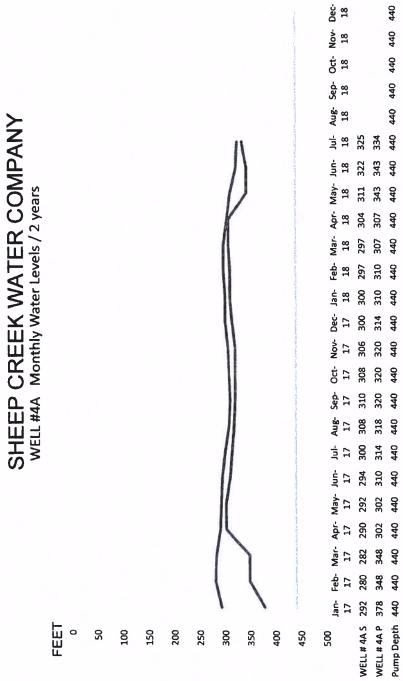


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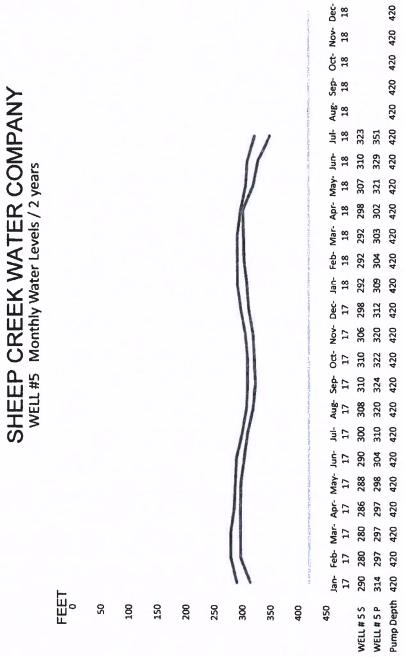
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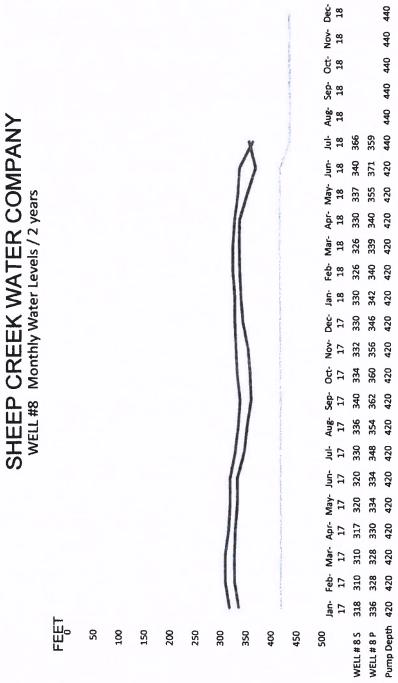


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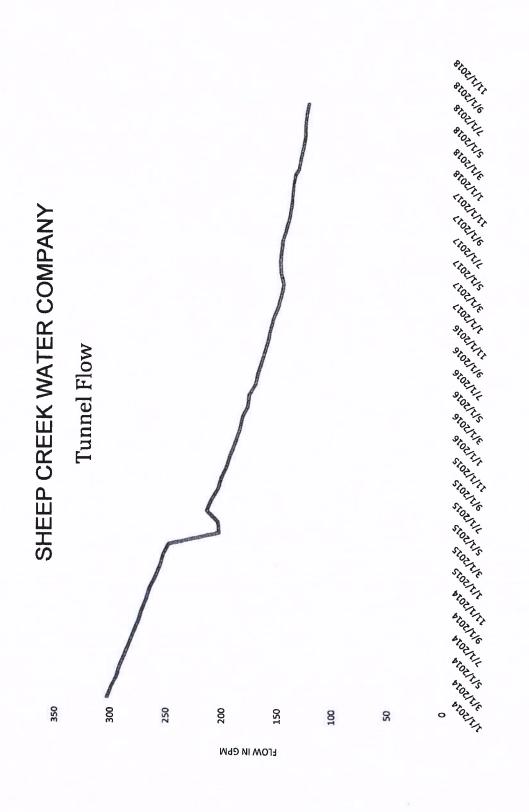


WELL# 4A S ---- WELL# 4A P ---- Pump Depth





WELL#85 ----Pump Depth



Kaur, Amy

From:

Chris Cummings <sheepcreek@verizon.net>

Sent:

Wednesday, August 22, 2018 2:51 PM

To:

Cazares, Hector I.@Waterboards; Zuniga, Eric@Waterboards

Cc:

swright@pphcsd.org

Subject:

Re: Sheep Creek Water Company Update

Hector,

An update to the first email, per the Water Exchange Agreement with Phelan Pinon Hills Community Service District, Sheep Creek Water is notifying the State Water Resources Board of an impending water production shortage. At this time we will continue to purchase water from PPHCSD.

I will send updated production records this afternoon after I receive updated pumping levels.

Thank You,

Chris Cummings Sheep Creek Water Company (760) 559-7956

----Original Message----

From: Cazares, Hector I.@Waterboards <Hector.Cazares@Waterboards.ca.gov>
To: Chris Cummings <sheepcreek@verizon.net>; Zuniga, Eric@Waterboards <Eric.Zuniga@waterboards.ca.gov>
Sent: Wed, Aug 22, 2018 2:34 pm

Subject: RE: Sheep Creek Water Company Update

Hello Chris,

Thank you for the update. Please keep us posted as you proceed, and let us know if anything changes. Do you have updated production records available for this month that you could send us?

Best regards, Hector Cazares



Hector I. Cazares, E.I.T.
Water Resource Control Engineer
Division of Drinking Water — San Bernardino
464 W 4th Street, Suite 437, San Bernardino, CA 92401
(909) 383-4312 Desk (909) 383-4328 Main Line
hector.cazares@waterboards.ca.gov

From: Chris Cummings [mailto:sheepcreek@verizon.net]

Sent: Wednesday, August 22, 2018 2:25 PM

To: Cazares, Hector I.@Waterboards < Hector. Cazares@Waterboards.ca.gov >; Zunlga, Eric@Waterboards

< Eric.Zuniga@waterboards.ca.gov >

Cc: swright@pphcsd.org

Subject: Sheep Creek Water Company Update

Good Afternoon Hector and Eric,

This is an update of the current water status for Sheep Creek. We were able to get current static water levels on the wells Monday due to Edison turn of power. 3 of the wells have had an increase of 5 feet and 1 well has had an increase of 18 feet. Consumption has been showing a decrease.

On August 10th we began to receive water from Phelan Pinon Hills CSD at the Tank 6 Interconnect. As of this afternoon we have received just under 10 AF of water and are looking to continue receiving water. We should began seeing a reduction in flow over the next week. If anything changes and we need to increase flow from PPHCSD I will let you know.

Thank You,

Chris Cummings Sheep Creek Water Company (760) 559-7956

APPENDIX 3 - NOTIFICATION OF RECEIPT

Compliance Order Number:05-13-18R-002

Name of Water System: Sheep Creek Water Company

System Number: 3610109

Certification

I certify that I am an authorized representative of the Sheep Cred	ek Water Company and that Compliance
Order No.05-13-18R-002 was received on	Further, I certify that the Order has
been reviewed by the appropriate management staff of the Shee	p Creek Water Company and it is clearly
understood that Compliance Order No.05-13-18R-002 contains le	egally enforceable directives with specific
due dates.	
Signature of Water System Representative	Date

THIS FORM MUST BE COMPLETED AND RETURNED TO THE STATE WATER BOARD, DIVISION OF DRINKING WATER, NO LATER THAN September 20, 2018

Disclosure: Be advised that the California Health and Safety Code, Sections 116725 and 116730 state that any person who knowingly makes any false statement on any report or document submitted for the purpose of compliance with the Safe Drinking Water Act may be liable for, respectively, a civil penalty not to exceed five thousand dollars (\$5,000) for each separate violation or, for continuing violations, for each day that violation continues, or be punished by a fine of not more than \$25,000 for each day of violation, or by imprisonment in the county jail not to exceed one year, or by both the fine and imprisonment.