SAN ANTONIO WATER COMPANY

BOARD OF DIRECTORS
MEETING
Tuesday, March 15, 2022
5:00 p.m.
In the Upland City Hall Council Chambers
460 N. Euclid Avenue, Upland, CA 91786

The San Antonio Water Company encourages public participation during our Board Meetings. Attendance at meetings is preferred. Recognizing that an adjustment period is appropriate for recently lifted pandemic restrictions and ongoing individual concerns, emails or phoned-in comments are also acceptable.

If you wish to provide comments by phone, please email blee@sawaterco.com at least two hours in advance of the meeting with your phone number and item you wish to comment on. Company staff will call you when the item comes up for discussion and you will be placed on speaker to address the Board.

Public comments regarding upcoming agenda items can be emailed to the Company at blee@sawaterco.com. Comments received by email at least two hours prior to the start of the meeting will be read at the appropriate time during the meeting.

- Call to Order
- Salute to the Flag
- A Moment of Silence in Honor of SAWCO President Tom Thomas

1. Recognitions and Presentations:

   A. Recognition of Tom Thomas for 25 years of Service to San Antonio Water Company

2. Additions-Deletions to the Agenda:

3. Shareholder-Public Testimony:
   This is the time for any shareholder or member of the public to address the board members on any topic under the jurisdiction of the Company, which is on or not on the agenda. Please note, pursuant to the Brown Act the board is prohibited from taking actions on items not listed on the agenda. For any testimony, speakers are requested to keep their comments to no more than four (4) minutes, including the use of any visual aids, and to do so in a focused and orderly manner. Anyone wishing to speak is requested to voluntarily fill out and submit a speaker's form to the manager prior to speaking.

4. Consent Calendar Items:
   All items listed hereunder are considered to be routine and there will be no separate discussion of these items unless members of the board request specific items to be removed from the consent calendar for separate action. All items listed or remaining will be voted upon in a single action.

   A. Approval of Board Meeting Minutes
      Regular Meeting Minutes of February 15, 2022.
   B. Planning, Resources, and Operations Committee (PROC) Meeting Minutes
      Approve meeting minutes of August 24, 2021.
   C. Administration and Finance Committee (AFC) Meeting Minutes
      No meeting to report.
   D. Financial Statement
      Income Statement and Balance Sheet for December 31, 2021
   E. Investment Activity Report
      Monthly Report of Investments Activity.

F. Water Production and Consumption
   Monthly water production and consumption figures.
G. Prominent Issues Update
   Status summaries on certain on-going active issues.
H. Projects and Operations Update
   Status summaries on projects and operations matters.
I. Groundwater Level Patterns [Quarterly in January, April, July, and October]
   Tracking patterns of groundwater elevations relative to ground surface.
J. Conservation Program Update [Quarterly in January, April, July, and October]
   Update on SAWCo's existing water conservation programs
K. Correspondence of Interest

5. Board Committee – Delegate Report:
   A. PVPA Representative Report
      Verbal report by representative.
   B. Six Basins Representative Report
      Verbal report by representative.
   C. Chino Basin Representative Report
      Verbal report by representative.
   D. Cucamonga Basin Representative Report
      Verbal update by representative.
   E. Administration and Finance Committee (AFC) Chairman's Report
      No meeting to report.
   F. Planning, Resources, and Operations Committee (PROC) Chairman's Report
      Report on meeting held Tuesday, February 22, 2022.
   G. Office Feasibility Study Ad Hoc Committee
      No meeting to report.

6. General Manager's Report on Activities
   A. Paloma Curve Hydraulic Break
      Proposal to conduct Engineering Assessment
   B. Holly Drive Reservoir Phase III
      Proposal to provide professional services
   C. Holly Drive Booster Station Screening
      Proposal to provide professional services
   D. Proposed Well 19
      Proposal to provide professional services
   E. COVID Response
      Verbal update

7. Closed Session:

8. Director's Comments and Future Agenda Items:

Adjournment:
The next regular Board Meeting will be held on Tuesday, April 19, 2022 at 5:00 p.m.

NOTE: All agenda report items and back-up materials are available for review and/or acquisition by calling the Company Office (909) 982-4107 (139 N. Euclid Avenue, Upland, CA) during regular office hours, Monday through Thursday [7:00 am – 11:30 am & 12:30 pm – 5:00 pm] and alternating Fridays [7:00 am – 11:30 am & 12:30 pm – 4:00 pm] and on the company's website www.sawaterco.com. The agenda is also available for review and copying at the Upland Public Library located at 450 N. Euclid Avenue.

POSTING STATEMENT: On March 10, 2022 a true and correct copy of this agenda was posted at the entry of the Company's Office (139 N. Euclid Avenue), on the public bulletin board at 450 No. Euclid Avenue (Upland Public Library) and on the Company's website.

SAN ANTONIO WATER COMPANY

MINUTES OF THE SAN ANTONIO WATER COMPANY
Tuesday, February 15, 2022

An open meeting of the Board of Directors of the San Antonio Water Company (SAWCo) was called to order at 5:05 p.m. on the above date at the Upland City Hall Council Chambers, 460 North Euclid Avenue, Upland, California. Directors present were Tom Thomas, Will Elliott, Bob Cable, Martha Goss, Rudy Zuniga, Bill Velto, and Kati Parker. Also in attendance were SAWCo's General Manager Brian Lee, Assistant General Manager Teri Layton, and Senior Administrative Specialist Kelly Mitchell. Director Thomas presided.

1. *Recognitions and Presentations:* Mr. Lee advised he had been out sick and was wearing a KN95 mask to provide comfort to those around him should he cough or sneeze.

2. *Additions-Deletions to the Agenda*: None.

3. *Shareholder-Public Testimony:* None.

4. *Consent Calendar Items:*
   - A. Approval of Board Meeting Minutes
     Regular Meeting Minutes of January 18, 2022.
   - B. Planning, Resources and Operations Committee (PROC) Meeting Minutes
     No meeting minutes to report.
   - C. Administration and Finance Committee (AFC) Meeting Minutes
     Meeting minutes of November 23, 2021.
   - D. Financial Statement
     Income Statement and Balance Sheet for November 30, 2021.
   - E. Investment Activity Report
     Monthly Report of Investments Activity.
   - F. Water Production and Consumption
     Monthly water production and consumption figures.
   - G. Prominent Issues Update
     Status summaries on certain on-going active issues.
   - H. Projects and Operations Update
     Status summaries on projects and operations matters.
   - I. Groundwater Level Patterns [Quarterly in January, April, July, and October]
     Tracking patterns of groundwater elevations relative to ground surface.
   - J. Conservation Program Update [Quarterly in January, April, July, and October]
     Update on SAWCo's existing water conservation programs
   - K. Correspondence of Interest

   Director Elliott moved and Director Velto seconded to approve the Consent Calendar as presented. Motion carried unanimously.

5. *Board Committee – Delegate Report:*
   A. Pomona Valley Protective Association (PVPA) Representative's Report – Director Thomas reported on the PVPA Meeting held February 9th. During the recent windstorm, two Claremont homeowner's trees fell onto PVPA land. One homeowner quickly contacted their insurance company to have the tree removed while the other felt it PVPA's responsibility. After some time, the second homeowner has contacted their insurance company to have the tree removed.

   The National Recreation Area bill that includes privately owned PVPA land continues to be at a standstill.

PVPA continues to not act on a weed abatement notice from the Los Angeles County Fire for sage on PVPA land located in an area of habitat. The Fish and Wildlife are advising to not abate. PVPA will await until there is a resolution to the issue.

The annual audit of PVPA financials has been completed and resulted in a perfect review.

B. Six Basins Representative Report – Ms. Layton reported the officers for the basin will remain the same as the previous year including Director Thomas as president.

Director Thomas informed the Board of a possible recharge basin. East of Padua Park in Claremont is an area beneficial for recharge of the basin. The watermaster is determining how best to move forward with the project.

C. Chino Basin Representative Report – Mr. Lee advised there are no new updates at this time.

D. Cucamonga Basin Representative Report – Mr. Lee stated interviews for the two remaining hydrogeologists being considered for the basin took place on February 1st. Both hydrogeologists did phenomenally well which is making it difficult for the parties to choose. Discussions on whom to hire are ongoing.

E. Administration and Finance Committee (AFC) Chairman's Report – Items discussed at the AFC meeting are included in the General Manager's Report on Activities.

F. Planning, Resources, and Operations Committee (PROC) Chairman's Report – No meeting to report.

G. Office Feasibility Study Ad Hoc Committee – No meeting to report.

6. *General Manager's Report on Activities:*

A. AFC Schedule for 2022 – Mr. Lee advised these items were brought to the AFC in January. The Committee agreed with the items but asked they be brought to the full Board for discussion.

Staff proposed sending out Requests for Proposals (RFPs) for both general legal services and Information Technology (IT) services. SAWCo has had the same legal counsel for several decades and will need to prepare for his potential retiring. The idea is to have current legal counsel train a local water lawyer to take over general counsel duties with him then moving to the special counsel position. SAWCo has had the same IT consultant for several years as well and would like to check if they are in line with the current industry.

Staff currently utilizes a robust financial and accounting software that is costly and would like to look into something that is more simplified with less cost to maintain.

Payroll is currently done inhouse. As part of the revamping of the Accounting and Personnel Specialist position, staff would like to outsource payroll.

Mr. Lee would also like to bring an end of year budget to the AFC in March, then to the full Board in April.

Director Velto felt it wise for a small company such as SAWCo to go out to bid for consultant work ever so often to see if they are getting the best services for their money.

B. Annual Shareholder's Meeting Appointment of Inspectors – Mr. Lee spoke to the Board about the difficulties of scheduling future meetings with the impending equipment upgrades to the City of Upland Council Chambers. Originally, SAWCo was unable to hold any March or April meetings in the Council Chambers due to these upgrades. However, staff was recently advised the upgrades

have been postponed to mid-April therefore the March Board Meeting and the Annual Shareholder's Meeting will be held in-person in the Council Chambers.

Due to the late notice of an in-person Annual Shareholder's Meeting, staff is proposing Mr. Lee and Ms. Layton be designated as Inspectors of Election for the meeting. No elections are being held at the meeting.

Director Velto moved and Director Elliott seconded to appoint General Manager Brian Lee and Assistant General Manager Teri Layton as Inspectors of Election for the 2022 Annual Shareholder's Meeting. Motion carried unanimously.

C. COVID Response – Mr. Lee mentioned the indoor mask mandate has ended. Staff continues to monitor and update procedures as information regarding how to handle COVID-19 cases changes.

7. *Closed Session:* None.

8. *Director's Comments and Future Agenda Items*: Director Goss advised she has received great feedback from San Antonio Heights residents for the field staff's response to the damage caused by the recent high winds. She asked that they be made aware of the positive responses.

Adjournment:
With no further business to discuss the meeting was adjourned at 5:20 p.m.

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Assistant Secretary
Brian Lee

MINUTES OF THE SAN ANTONIO WATER COMPANY
PLANNING, RESOURCES, and OPERATIONS COMMITTEE
August 24, 2021

An open meeting of the Planning, Resources, and Operations Committee (PROC) of the San Antonio Water Company (SAWCo) was called to order virtually at 3:01 p.m. on the above date. Committee members present were Will Elliott and Tom Thomas. Also in attendance were SAWCo's General Manager Brian Lee, Assistant General Manager Teri Layton, and Senior Administrative Specialist Kelly Mitchell. Director Elliott presided.

1. Recognitions and Presentations – None.

2. Additions-Deletions to the Agenda – None.

3. Public Comments – None.

4. Approval of Committee Meeting Minutes:
   A. Regular Committee Minutes of June 22, 2021 – Director Thomas moved, and Director Elliott seconded to approve the meeting minutes of June 22, 2021 as presented. Motion carried unanimously with Directors Rudy Zuniga and Kati Parker absent.

5. Planning and Operational Issues:

6. Planning and Operational Updates -
   A. ***Project Status Report/Project List***
   - Holly Drive Reservoir – The new 120,000-gallon reservoir is now in service. The old 60,000-gallon reservoir has been taken offline. Staff is working with the engineer to determine when the second 120,000-gallon reservoir can be built. At that time, the 60,000-gallon reservoir will be demolished.

     Director Thomas mentioned San Bernardino County, utilizing one of SAWCo's contractors, cleared out debris from behind the 23rd Street Dam.

   B. Paloma Cure Hydraulic Break – Mr. Lee informed the Committee that he met with the homeowner a couple of weeks ago in the on-going attempt to find the best resolution to the low frequency noise. He entered the hydraulic break to better see how it works. Pictures and a drawing of the flow of water through the hydraulic break were provided to the Committee.

   An engineering team is reviewing three options to reduce the noise at the site. One option is to remove the chamber and replace it with a pipeline. A second option is to replace the metal structure with a concrete roof and line the interior with low frequency sound vibration dampener. The third option would be to abandon the site and put a new pipeline in the right-of-way in the street. Mr. Lee advised there is also a low frequency noise occurring north of the hydraulic break as well. He is unsure what is causing the noise.

As far as the hydroelectric building on the property, the homeowner has advised he is okay with the building being abandoned but remaining on the property.

Director Thomas felt it better to take the time to investigate all options to make the best decision rather than to just act quickly.

C. **Company Treatment Plant –** Mr. Lee advised he issued a short form request for proposals on what it would take to build a treatment plant for SAWCo. Currently, the City of Upland treatment plant can only accept flows of one million gallons per day or more. When flows drop below this the treatment plant is shut down. SAWCo loses the potential to sell up to one million gallons of surface flow from the canyon when the treatment plant is shut down. Staff is proposing building its own treatment plant so these canyon flows can be delivered to shareholders rather than spread.

The Committee was provided the proposals sans the fee estimate. Mr. Lee requested feedback on the proposals from the Committee.

Director Thomas commented that all three firms appear well qualified. He appreciated WSC's long term approach to the project and felt they are the best firm for the job. Director Elliott agreed that all three firms were qualified and did not have a preference as to whom SAWCo utilized. Ms. Layton stated she felt TKE was the front runner as they have experience with the City of Upland and felt WSC may have too many projects going on. Mr. Lee also placed TKE at the top of his preferred list with IEC second due in part to their lack of familiarity with SAWCo facilities.

Mr. Lee then revealed the fees estimate for each proposal. TKE's proposal was least expensive at $24,000, with IEC coming in at $32,100, and WSC at $32,795.

Director Thomas moved and Director Elliott seconded to recommend the Board approve TKE as the consultant for the Company treatment plant. Motion carried with Director Zuniga and Director Parker absent.

Director Thomas questioned where staff is considering locating the treatment plant. Mr. Lee advised there are two proposed sites. One is at the Forebay facility because that is where SAWCo irrigation and potable waterlines converge. The other possible location is at Benson Avenue as all municipal shareholders can receive water near this location.

Director Thomas also inquired whether it might be more beneficial and less costly to have modifications done to the City of Upland's treatment plant. Mr. Lee stated that in talks with the Public Works Director for the City of Upland, upgrades to their treatment plant isn't something they would consider at this time.

7. Basin Issues and Updates
   - ***San Antonio Canyon Watershed*** **–** Ms. Layton reported that every five years a Watershed Sanitary Survey is required. City of Pomona, City of Upland, and SAWCo cost shared in getting this survey completed by a consultant and

submitted to the Department of Drinking Water (DDW). A letter of review is expected shortly. October 2nd from 9 a.m. to 11 a.m. will be the Water Shed Clean Up Day. The next meeting is scheduled for September 15th to discuss and coordinate the clean-up day.

- ***Chino Basin*** – Mr. Lee reported on the discussions between the Agricultural Pool and Appropriative Pool over the payment of the Agricultural Pool's legal fees. The Agricultural Pool is to provide lightly redacted legal invoices to the Appropriative Pool for consideration, but they have yet to agree on what amount of redacting is acceptable.
- ***Six Basins*** – Ms. Layton advised there is nothing new to report. The next meeting is scheduled for the following day where they will be going through the new attorney's contract.
  Director Thomas advised Six Basins will have their outgoing attorney present at tomorrow's meeting and possibly some upcoming meetings for continuity.
- ***Cucamonga Basin*** – Ms. Layton stated there is no update on this item since the recent Board meeting. The next meeting is scheduled for September 7th where they will discuss a possible development near the Sycamore Inn as it relates to monitoring water as part of the Judgment.

8. Closed session: None.

9. Committee's Comments and Future Agenda Items: None.

Adjournment: –The meeting adjourned at 3:29 p.m.

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Assistant Secretary
Brian Lee

San Antonio Water Company, CA

Income Statement

Group Summary

For Fiscal: 2021 Period Ending: 12/31/2021

IncomeStatement	Original Total Budget	Current Total Budget	MTD Activity	YTD Activity	Budget Remaining
Category: 4 - Income					
SubCategory: 40 - Shareholder Revenue					
1185 - Domestic Water Income (Base)	301,000.00	301,000.00	33,380.13	269,580.13	31,419.87
1215 - Domestic Water Income (Supplemental)	148,000.00	148,000.00	31,729.84	240,588.23	-92,588.23
1220 - Domestic Water Income (Tier 3)	104,000.00	104,000.00	50,216.41	332,874.24	-228,874.24
1230 - Domestic Water Income (Readi/Chrg)	200,000.00	200,000.00	33,539.79	201,505.95	-1,505.95
1235 - Domestic Water Availability Charge (WAC)	60,000.00	60,000.00	10,113.55	60,905.54	-905.54
1245 - Municipal Water Income (Base)	3,100,000.00	3,100,000.00	200,401.60	2,581,329.70	518,670.30
1268 - Municipal Water Income (Readi/Chrg)	80,000.00	80,000.00	6,400.00	77,300.00	2,700.00
1274 - Misc Water Income (Base)	220,000.00	220,000.00	6,456.77	199,771.50	20,228.50
1275 - Misc Water Income (Supplemental)	126,000.00	126,000.00	276.93	9,015.64	116,984.36
1276 - Munnicipal Water Availability Charge (WAC)	477,000.00	477,000.00	39,756.00	476,968.00	32.00
1280 - Misc Water Income (Tier 3)	15,000.00	15,000.00	0.00	47.85	14,952.15
1288 - Misc Water Income (Readi/Chrg)	23,000.00	23,000.00	1,880.00	23,370.00	-370.00
1290 - Misc Water Availability Charge (WAC)	24,000.00	24,000.00	1,922.00	23,064.00	936.00
1295 - Dormant Water Availability Charge (WAC)	54,000.00	54,000.00	8,462.02	52,094.36	1,905.64
1300 - Sale of Water/From Storage	0.00	0.00	150,000.00	330,000.00	-330,000.00
1400 - Stock Transfer	5,000.00	5,000.00	390.00	5,070.00	-70.00
1410 - Late/Re-establishment Fee	4,000.00	4,000.00	45.00	840.00	3,160.00
1420 - Return Check Fee	0.00	0.00	25.00	50.00	-50.00
1430 - Stock Certificate Storage and Handling Fee	0.00	0.00	80.00	280.00	-280.00
SubCategory: 40 - Shareholder Revenue Total:	**4,941,000.00**	**4,941,000.00**	**575,075.04**	**4,884,655.14**	**56,344.86**
SubCategory: 42 - Non-Shareholder Revenue					
1725 - Misc. Income	2,000.00	2,000.00	114.89	8,065.19	-6,065.19
1750 - Service/Litigation Agreements	0.00	0.00	239.59	1,070.55	-1,070.55
1753 - Ground Lease Income	54,000.00	54,000.00	6,111.84	69,514.08	-15,514.08
1755 - Interest Earned	90,000.00	90,000.00	19,401.60	34,948.15	55,051.85
1760 - Sale of Stored Water to Non-Shareholder	0.00	0.00	100,000.00	100,000.00	-100,000.00
1785 - Gain on Sale of Asset	344,000.00	344,000.00	343,059.45	343,059.45	940.55
SubCategory: 42 - Non-Shareholder Revenue Total:	**490,000.00**	**490,000.00**	**468,927.37**	**556,657.42**	**-66,657.42**
Category: 4 - Income Total:	**5,431,000.00**	**5,431,000.00**	**1,044,002.41**	**5,441,312.56**	**-10,312.56**
Category: 5 - O & M Expense					
SubCategory: 50 - Operating Facilities					
2175 - Facility Related Field Labor	225,000.00	225,000.00	16,613.46	241,099.08	-16,099.08
2235 - Repairs to Facilities and Equipment	300,000.00	300,000.00	-64,379.15	261,314.16	38,685.84
2265 - Power-Gas & Electric (utilities)	600,000.00	600,000.00	66,565.56	793,787.65	-193,787.65
SubCategory: 50 - Operating Facilities Total:	**1,125,000.00**	**1,125,000.00**	**18,799.87**	**1,296,200.89**	**-171,200.89**
SubCategory: 51 - Operating Activities					
2475 - Customer Service	85,000.00	85,000.00	4,145.48	82,811.61	2,188.39
2498 - Conservation	20,000.00	20,000.00	855.00	12,842.26	7,157.74
SubCategory: 51 - Operating Activities Total:	**105,000.00**	**105,000.00**	**5,000.48**	**95,653.87**	**9,346.13**
SubCategory: 52 - Other Operating Expense					
2205 - Non-Facility Related Labor	75,000.00	75,000.00	4,663.68	61,072.48	13,927.52
2210 - O & M - All Other	3,800.00	3,800.00	0.00	5,788.50	-1,988.50
2295 - Supplies (Inventory & Tools Expense)	10,000.00	10,000.00	2,640.28	13,481.80	-3,481.80
2565 - Depreciation/Amortization	903,000.00	903,000.00	87,308.85	947,866.95	-44,866.95
2715 - Property Taxes	220,000.00	220,000.00	0.00	222,111.53	-2,111.53
2805 - Water Resource Mgmt.	200,000.00	200,000.00	63,693.61	120,551.97	79,448.03
2845 - Inventory Shrinkage	0.00	0.00	2,119.48	2,119.48	-2,119.48
SubCategory: 52 - Other Operating Expense Total:	**1,411,800.00**	**1,411,800.00**	**160,425.90**	**1,372,992.71**	**38,807.29**
Category: 5 - O & M Expense Total:	**2,641,800.00**	**2,641,800.00**	**184,226.25**	**2,764,847.47**	**-123,047.47**

IncomeStatement	Original Total Budget	Current Total Budget	MTD Activity	YTD Activity	Budget Remaining
Category: 6 - G & A Expense					
SubCategory: 60 - Personnel					
2115 - Administrative Services	290,000.00	290,000.00	24,788.51	304,460.73	-14,460.73
2130 - Development/Water Svc. App.	1,000.00	1,000.00	0.00	0.00	1,000.00
2325 - Payroll Taxes	80,000.00	80,000.00	4,466.00	73,213.81	6,786.19
2355 - Worker's Compensation Insurance	15,000.00	15,000.00	1,633.00	16,151.00	-1,151.00
2385 - Benefit Pay (Vac., sick, etc.)	185,000.00	185,000.00	22,188.70	165,629.34	19,370.66
2415 - Benefit Insurance (Pension,Life,Medical,Vision etc	250,000.00	250,000.00	21,403.18	245,780.78	4,219.22
2430 - Benefit Administrative Services	3,000.00	3,000.00	0.00	2,275.00	725.00
SubCategory: 60 - Personnel Total:	**824,000.00**	**824,000.00**	**74,479.39**	**807,510.66**	**16,489.34**
SubCategory: 61 - Other					
2445 - Office/IT Support	63,000.00	63,000.00	2,742.25	54,865.68	8,134.32
2505 - Directors Fees & Expense	34,000.00	34,000.00	1,750.00	31,655.36	2,344.64
2535 - Liability Insurance	30,000.00	30,000.00	0.00	35,510.00	-5,510.00
2595 - Communication	40,000.00	40,000.00	3,412.64	41,226.58	-1,226.58
2625 - Dues & Publications	3,000.00	3,000.00	0.00	2,652.95	347.05
2655 - Outside Services	30,000.00	30,000.00	260.32	12,017.21	17,982.79
2745 - Income Tax Expense	14,000.00	14,000.00	-2,714.00	9,142.00	4,858.00
2775 - Accounting	70,000.00	70,000.00	3,258.03	73,201.99	-3,201.99
2776 - Legal	250,000.00	250,000.00	10,012.50	187,143.42	62,856.58
2790 - Human Resources Expense	45,000.00	45,000.00	3,307.09	71,245.44	-26,245.44
2865 - All other	35,000.00	35,000.00	28,098.68	42,198.90	-7,198.90
SubCategory: 61 - Other Total:	**614,000.00**	**614,000.00**	**50,127.51**	**560,859.53**	**53,140.47**
Category: 6 - G & A Expense Total:	**1,438,000.00**	**1,438,000.00**	**124,606.90**	**1,368,370.19**	**69,629.81**
Total Surplus (Deficit):	**1,351,200.00**	**1,351,200.00**	**735,169.26**	**1,308,094.90**	

Fund Summary

Fund		Original Total Budget	Current Total Budget	MTD Activity	YTD Activity	Budget Remaining
10 - 10		1,351,200.00	1,351,200.00	735,169.26	1,308,094.90	43,105.10
	Total Surplus (Deficit):	**1,351,200.00**	**1,351,200.00**	**735,169.26**	**1,308,094.90**	

Balance Sheet

Account Summary

As Of 12/31/2021

San Antonio Water Company, CA

Account	Name	Balance
Fund: 10 - 10		
Assets		
BalSubCategory: 10 - Cash		
10-00-00-10100-00000	Petty Cash	250.00
10-00-00-10201-00000	Checking Account-8431	2,409,823.15
10-00-00-10415-00000	D&O Checking Account	298,508.70
10-00-00-10438-00000	Depre/Obsolescene Res (LAIF)	3,408,806.66
	Total BalSubCategory 10 - Cash:	**6,117,388.51**
BalSubCategory: 11 - Accounts Receivable		
10-00-00-11100-00000	Accounts Receivable-Domestic	169,386.56
10-00-00-11200-00000	Accounts Receivable-Municipal	425,431.77
10-00-00-11250-00000	Accounts Receivable-Misc.	10,503.70
10-00-00-11260-00000	Accounts Receivable - Dormant	9,415.28
10-00-00-11275-00000	Contra Accounts Receivable - Unapplied Cre	-16,116.33
10-00-00-11300-00000	Accounts Receivable-Other	679,128.38
10-00-00-11301-00000	Note Receivable	688,000.00
	Total BalSubCategory 11 - Accounts Receivable:	**1,965,749.36**
BalSubCategory: 12 - Inventory		
10-00-00-12100-00000	Inventories-Materials & Supply	162,452.13
	Total BalSubCategory 12 - Inventory:	**162,452.13**
BalSubCategory: 13 - Prepaid		
10-00-00-13100-00000	Prepaid Insurance	8,868.75
10-00-00-13105-00000	PREPAID POSTAGE	369.00
10-00-00-13200-00000	Prepaid State Franchise Tax	2,858.00
	Total BalSubCategory 13 - Prepaid:	**12,095.75**
BalSubCategory: 14 - Investments		
10-00-00-14150-00000	P.V.P.A. Investment	1.00
10-00-00-14151-00000	457B Plan Investment	54,019.05
	Total BalSubCategory 14 - Investments:	**54,020.05**
BalSubCategory: 15 - Property, Plant, & Equipment		
10-00-00-15100-00000	Land & Water Rights	920,161.26
10-00-00-15110-1507J	Work in Progress "Proj J"	72,466.00
10-00-00-15110-1602U	Work in Progress	1,174,433.41
10-00-00-15110-2003	Work In Progress	696,735.38
10-00-00-15110-2101	Work In Progress	17,783.35
10-00-00-15110-2102	Work In Progress	10,869.37
10-00-00-15110-2103	Work In Progress	123,576.94
10-00-00-15110-2104	Work In Progress	9,558.60
10-00-00-15110-2108	Work In Progress	80,965.44
10-00-00-15110-2109	Work In Progress	11,232.00
10-00-00-15110-2110	Work In Progress	13,709.84
10-00-00-15150-00000	Buildings & Site Improvements	1,746,624.52
10-00-00-15200-00000	Wells-Shafts, Bldgs, & Equip	4,910,918.85
10-00-00-15250-00000	Boosters-Bldgs & Equip	2,500,593.23
10-00-00-15300-00000	Reservoirs	3,081,787.33
10-00-00-15350-00000	Tunnels, Forebay, & Ponds	1,587,111.19
10-00-00-15400-00000	Spreading Works-Cucamonga Wash	54,859.53
10-00-00-15410-00000	Spreading Works-SanAntonio Wsh	50,235.18
10-00-00-15450-00000	Pipelines	18,532,025.08
10-00-00-15500-00000	Autos & Equipment	513,205.56
10-00-00-15550-00000	Tools	110,134.46
10-00-00-15600-00000	Telemetry System	600,886.90
10-00-00-15650-00000	Office Equipment	527,323.97

Account	Name	Balance	
10-00-00-15990-00000	Accumulated Depreciation	-14,366,295.45	
	Total BalSubCategory 15 - Property, Plant, & Equipment:	**22,980,901.94**	
BalSubCategory: 16 - Other Assets			
10-00-00-16100-00000	Documents & Studies	907,379.38	
10-00-00-16100-1905	WIP- Master Plan and Asset Managment Prc	156,883.47	
10-00-00-16100-2105	WIP-2020 URBAN WATER MANAGEMENT Pl	42,440.28	
10-00-00-16100-2106	WIP- WATER INFRASTRUCTURE ACT AND RE	44,875.16	
10-00-00-16100-2111	WIP-2021 Amer's Water INFRA Act Emerg R	387.34	
10-00-00-16990-00000	Accumulated Amortization	-730,023.27	
	Total BalSubCategory 16 - Other Assets:	**421,942.36**	
	Total Assets:	**31,714,550.10**	**31,714,550.10**
Liability			
BalSubCategory: 13 - Prepaid			
10-00-00-20650-00000	Deferred Revenue Deposit	14,016.00	
	Total BalSubCategory 13 - Prepaid:	**14,016.00**	
BalSubCategory: 20 - Short-term less than 1 year			
10-00-00-20100-00000	Trade Accounts Payable	107,213.34	
10-00-00-20115-00000	D&O Trade Accounts Payable	97,178.37	
10-00-00-20600-00000	Water Hydrant Meter Deposit	1,700.00	
10-00-GN-20820-00000	Accrued Vacation Payable	20,404.60	
10-00-OP-20820-00000	Accrued Vacation Payable	24,818.57	
	Total BalSubCategory 20 - Short-term less than 1 year:	**251,314.88**	
BalSubCategory: 21 - Long-term more than 1 year			
10-00-00-20152-00000	457B Deferred Comp Liability	54,019.05	
10-00-00-21500-00000	Unclaimed Credits	614,939.12	
10-00-00-22100-00000	Deferred Gain	686,118.88	
	Total BalSubCategory 21 - Long-term more than 1 year:	**1,355,077.05**	
	Total Liability:	**1,620,407.93**	
Equity			
BalSubCategory: 30 - Stockholder equity			
10-00-00-30200-00000	Contributed Capital - Ext. Fee	447,258.02	
10-00-00-30210-00000	Contr. Property, Plant & Equip	2,432,256.77	
10-00-00-30300-00000	Capital Account	1,500,000.00	
10-00-00-30310-00000	Unissued Capital Stock	-861,100.00	
10-00-00-30400-00000	Retained Earngs-Brd Designated	3,707,315.36	
10-00-00-30410-00000	Retained Earnings-Unrestricted	21,560,317.12	
	Total BalSubCategory 30 - Stockholder equity:	**28,786,047.27**	
	Total Beginning Equity:	**28,786,047.27**	
Total Revenue		5,441,312.56	
Total Expense		4,133,217.66	
Revenues Over/Under Expenses		**1,308,094.90**	
	Total Equity and Current Surplus (Deficit):	**30,094,142.17**	
	Total Liabilities, Equity and Current Surplus (Deficit):		**31,714,550.10**

Monthly Investment Activity Summary - Compiled from Banking Statements for Correlation with Monthly Financials

Institution	Type of Investment	Date of Maturity	Rate of Interest	Account Balance as of 12/31/2021	Reserves		
					Operating	Depreciation & Obsolescence	Modernization
Citizens Business Bank (CBB)	*Checking	N/A	No Interest	2,409,823.15	2,409,823.15		
Citizens Business Bank (CBB)	*D&O Checking	N/A	No Interest	298,508.70		$ 298,508.70	
Local Agency Investment Fund	LAIF	N/A	0.212%	3,408,806.66	$ -	$ 2,696,447.66	$ 712,359.00
			TOTAL:	$ 6,117,138.51	$ 2,409,823.15	$ 2,994,956.36	$ 712,359.00

2022 Production

CHINO BASIN	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Yearly Production Rights = 1232	30.53%	30.54%	30.56%	30.57%	30.58%	30.60%	-	-	-	-	-	-	
Well #12 - inactive	-	-	-	-	-	-	-	-	-	-	-	-	-
Well #15 - Domestic	0.14	0.07	-	-	-	-	-	-	-	-	-	-	0.21
Well #16 - Domestic	0.27	0.10	-	-	-	-	-	-	-	-	-	-	0.36
Well#18 - inactive	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal	**0.41**	**0.17**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0.57**

CUCAMONGA BASIN	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Yearly Production Rights = 5669 (1169 10-yr Average Spread)	7.45%	14.00%	20.56%	27.82%	34.47%	41.30%	48.12%	54.92%	61.73%	68.53%	75.34%	82.15%	
Well #2	103.07	101.77	-	-	-	-	-	-	-	-	-	-	204.84
Well #3	0.00	0.32	-	-	-	-	-	-	-	-	-	-	0.32
Well#19 - inactive	-	-	-	-	-	-	-	-	-	-	-	-	-
Well #22	7.68	17.47	-	-	-	-	-	-	-	-	-	-	25.15
Well #24	75.83	95.07	-	-	-	-	-	-	-	-	-	-	170.90
Well #31	-	-	-	-	-	-	-	-	-	-	-	-	-
Well #32 - Domestic	-	-	-	-	-	-	-	-	-	-	-	-	-
Upl. # 15 {SAWCo's Rts]	235.52	157.13	-	-	-	-	-	-	-	-	-	-	392.65
Subtotal	**422.10**	**371.76**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**793.86**
Upl. # 15 {WECWCo's Rts] Memo Only	-	-	-	-	-	-	-	-	-	-	-	-	-

SIX BASINS	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Yearly Production Rights = 932	8.97%	17.03%	25.09%	34.01%	42.17%	50.56%	58.94%	67.29%	75.66%	84.02%	92.39%	100.75%	
Well #25-A	33.58	32.90	-	-	-	-	-	-	-	-	-	-	66.49
Well #26	0.14	-	-	-	-	-	-	-	-	-	-	-	0.14
Well 27-A	49.93	42.19	-	-	-	-	-	-	-	-	-	-	92.12
Subtotal	**83.65**	**75.09**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**158.74**

TOTAL PUMPED	**506.16**	**447.02**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**953.18**

GRAVITY FLOW	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
V screen	515.99	343.43	-	-	-	-	-	-	-	-	-	-	859.42
backwash from city treatment plant	71.87	10.97	-	-	-	-	-	-	-	-	-	-	82.84
San Antonio Tunnel (forebay)	232.89	221.11	-	-	-	-	-	-	-	-	-	-	454.00
Frankish & Stamm Tunnel 8"	65.06	20.52	-	-	-	-	-	-	-	-	-	-	85.58
San Ant. Tunnel Connect to City	-	-	-	-	-	-	-	-	-	-	-	-	-
Discharge to waste	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL GRAVITY	**885.80**	**596.04**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1,481.84**

Monthly													
San Antonio Tunnel	**232.89**	**221.11**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**454.00**
V Screen, Frankish & Stamm Tunnel and TP Backwash	**652.91**	**374.93**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1,027.84**
Gravity Production	**885.80**	**596.04**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1,481.84**

Cumulative													
San Antonio Tunnel	**232.89**	**454.00**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**454.00**
V Screen, Frankish & Stamm Tunnel and TP Backwash	**652.91**	**1,027.84**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1,027.84**
Gravity Production	**885.80**	**1,481.84**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	

Purchased Water - Upl. City to Dom. Sys.	-	-	-	-	-	-	-	-	-	-	-	-	-

Total Production	**1,391.96**	**1,043.07**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**2,435.02**
Total Cumulative Production	**1,391.96**	**2,435.02**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Domestic Production	233.30	221.28	-	-	-	-	-	-	-	-	-	-	454.58
Irrigation Production	1,125.08	788.88	-	-	-	-	-	-	-	-	-	-	1,913.96

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
RainFall (Inches)	**0.22**	**0.44**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Cumulative (Inches)	**0.22**	**0.66**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

3/9/22
All units in acre-feet

2022 Consumption

DOMESTIC	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Dom. Sys. - Base	53.80	38.74	-	-	-	-	-	-	-	-	-	-	92.54
Dom. Sys. - Supplemental	7.79	25.76	-	-	-	-	-	-	-	-	-	-	33.55
Dom Sys - Tier 3	3.12	21.92	-	-	-	-	-	-	-	-	-	-	25.04
Dom. Sys. - Del. to Upland(24th/Campus)	60.27	55.25	-	-	-	-	-	-	-	-	-	-	115.52
Dom. Sys. -Del. To Upland (Well 16/15)	0.27	-	-	-	-	-	-	-	-	-	-	-	0.27
Dom. Sys. - Del. to Upland(24th/Mtn)-installed 4/2/19	-	-	-	-	-	-	-	-	-	-	-	-	-
Tunnel meter to the Upland	-	-	-	-	-	-	-	-	-	-	-	-	-
Discharge to waste	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	**125.24**	**141.67**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**266.92**
Truck Loads - note only crosswall projects	-	-	-				-	-	-				-
Well 32 Hydrant Mtr. - note only(started 8/6/18)Crosswalls	-	-	-	-	-	-	-	-	-	-	-	-	-
Irr. Note only Del. to MVWD(wheeled through Upland)	(11.92)	-	-	-	-	-	-	-	-	-	-	-	(11.92)

IRRIGATION	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Irrig. Sys.-Upland(Pump & Rec'd) (City W#15)	235.52	157.13	-	-	-	-	-	-	-	-	-	-	392.65
Irrig. Sys. - Upl. City - Tier 1	324.42	416.68	-	-	-	-	-	-	-	-	-	-	741.10
Irrig. Sys. - Upl. City - Tier 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig. Sys. - Monte Vista - Tier 1	56.52	39.60	-	-	-	-	-	-	-	-	-	-	96.12
Irrig. Sys. - Monte Vista - Tier 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig. Sys. - Ont. City - Tier 1	39.60	35.10	-	-	-	-	-	-	-	-	-	-	74.70
Irrig. Sys. - Ont. City - Tier 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig. Sys. - Cucamonga Valley - Tier 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig Sys. - Cucamonga Valley - Tier 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig. Sys. - Holiday Rock Co - Tier 1	12.41	14.52	-	-	-	-	-	-	-	-	-	-	26.93
Irrig. Sys. - Holiday Rock Co - Tier 2	-	3.99	-	-	-	-	-	-	-	-	-	-	3.99
Irrig. Sys. - Holiday Rock Co - Tier 3	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig. Sys. - Red Hill Golf Course - Tier 1	7.09	16.60	-	-	-	-	-	-	-	-	-	-	23.70
Irrig. Sys. - Red Hill Golf Course - Tier 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig. Sys. - Red Hill Golf Course - Tier 3	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig. Sys. - Red Hills HOA - Tier 1	0.06	0.16	-	-	-	-	-	-	-	-	-	-	0.22
Irrig. Sys. - Red Hills HOA - Tier 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig. Sys. - Red Hills HOA - Tier 3	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig. Sys. - Minor Irrigators - Tier 1	0.93	1.76	-	-	-	-	-	-	-	-	-	-	2.69
Irrig. Sys. - Minor Irrigators - Tier 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Irrig. Sys. - Minor irrigators - Tier 3	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	**676.55**	**685.55**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1,362.09**

COMPANY TOTALS	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
San Antonio Heights	64.71	86.42	-	-	-	-	-	-	-	-	-	-	**151.13**
City of Upland	620.47	629.06	-	-	-	-	-	-	-	-	-	-	**1,249.53**
Monte Vista Water District	56.52	39.60	-	-	-	-	-	-	-	-	-	-	**96.12**
City of Ontario	39.60	35.10	-	-	-	-	-	-	-	-	-	-	**74.70**
Cucamonga Valley Water District	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Holiday Rock Company	12.41	18.51	-	-	-	-	-	-	-	-	-	-	**30.92**
Red Hills Golf Course	7.09	16.60	-	-	-	-	-	-	-	-	-	-	**23.70**
Red Hill HOA	0.06	0.16	-	-	-	-	-	-	-	-	-	-	**0.22**
Minor Irrigators	0.93	1.76	-	-	-	-	-	-	-	-	-	-	**2.69**
TOTAL	**801.79**	**827.22**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1,629.01**

IRRIGATORS													
Irrigator Emberton	0.04	0.08	-	-	-	-	-	-	-	-	-	-	**0.13**
Irrigator McMurray	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Irrigator Mistretta	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Irrigator Nisbit	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Irrigator Scheu	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Irrigator Pfister	*0.89*	*1.67*	-	-	-	-	-	-	-	-	-	-	***2.56***

3/9/22
all units in acre-feet

2022 Spread and Storage

Cucamonga Basin

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
23rd St. (Meter) - Basin 6 - A	0.12	0.06	-	-	-	-	-	-	-	-	-	-	0.18
15th Street Basin	-	-	-	-	-	-	-	-	-	-	-	-	-
Basin 3 meter (23rd street Clock)	106.81	104.29	-	-	-	-	-	-	-	-	-	-	211.11
Frankish & Stamm Tunnel to Basin 3	65.06	20.52	-	-	-	-	-	-	-	-	-	-	85.58
Vscreen via Frankish & Stamm Meter to Basin 3	16.84	39.32	-	-	-	-	-	-	-	-	-	-	56.16
PRV Station (res 1)(basin 6)	6.99	-	-	-	-	-	-	-	-	-	-	-	6.99
Monthly Spread	**195.83**	**164.19**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**360.02**
Cumulative Spread	**195.83**	**360.02**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	

Six Basins

Note: City of Upland Well Exercising may contribute to spread

Monthly Spread	**63.35**	**25.27**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**88.62**
Cumulative Spread	**63.35**	**88.62**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	

Note:Maximum end of year storage limit: 2,000 AF

Previous Storage	1,970.00	2,027.37	2,055.21	2,132.88	2,210.54	2,288.21	2,365.88	2,443.54	2,521.21	2,598.88	2,676.54	2,754.21
Spread	63.35	25.27	-	-	-	-	-	-	-	-	-	-
Unused Monthly OSY	(5.98)	2.57	77.67	77.67	77.67	77.67	77.67	77.67	77.67	77.67	77.67	77.67
Current Storage Estimate	**2,027**	**2,055**	**2,133**	**2,211**	**2,288**	**2,366**	**2,444**	**2,521**	**2,599**	**2,677**	**2,754**	**2,832**

932 yearly OSY = 77.67 monthly OSY

Chino Basin

Monthly Spread	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Cumulative Spread	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	

Local Supplemental Account (Spreading)*	3,923.25	3,923.25	-	-	-	-	-	-	-	-	-	-
Carry Over Account	1,232.00	1,232.00	-	-	-	-	-	-	-	-	-	-
Excess Carry Over Account*	2,104.00	2,206.26	-	-	-	-	-	-	-	-	-	-
Preemptive Replenishment Account	-	-	-	-	-	-	-	-	-	-	-	-
Total Storage	**7,259.25**	**7,361.51**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Spread	-	-	-	-	-	-	-	-	-	-	-	-
Unused Monthly OSY	102.26	102.50	-	-	-	-	-	-	-	-	-	-
Current Storage Estimate*	**7,362**	**7,464**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

1,232 yearly OSY = 102.67 monthly OSY

* Does not include yearly storage loses calc of 0.07%

Company Wide

Monthly Spread	**259.18**	**189.46**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**448.64**
Cumulative Spread	**259.18**	**448.64**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	
Total Current Storage Estimate	**9,389**	**9,519**	**2,133**	**2,211**	**2,288**	**2,366**	**2,444**	**2,521**	**2,599**	**2,677**	**2,754**	**2,832**	

Meter to spread ponds (NOTE ONLY)	-	-	-	-	-	-	-	-	-	-	-	-	-

2022 GW Production Rights

Yearly %	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
	8%	17%	25%	33%	42%	50%	58%	67%	75%	83%	92%	100%

Cucamonga Basin Production

Yearly Production Rights = 5669 (4,500AF + 1169AF 10-yr Average Spread)

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Production	422.10	371.76	-	-	-	-	-	-	-	-	-	-	
Cumulative Production	422.10	793.86	-	-	-	-	-	-	-	-	-	-	**793.86**
Cumulative Production Rights	472.43	944.85	-	-	-	-	-	-	-	-	-	-	**5,669**
% of Production Rights*	**7.45%**	**14.00%**	**20.56%**	**27.82%**	**34.47%**	**41.30%**	**48.12%**	**54.92%**	**61.73%**	**68.53%**	**75.34%**	**82.15%**	**14.0%**

Six Basins Production

Yearly Production Rights = 932AF

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Production	83.65	75.09	-	-	-	-	-	-	-	-	-	-	
Cumulative Production	83.65	158.74	-	-	-	-	-	-	-	-	-	-	**158.74**
Cumulative Production Rights	77.68	155.35	-	-	-	-	-	-	-	-	-	-	**932**
% of Production Rights*	**8.97%**	**17.03%**	**25.09%**	**34.01%**	**42.17%**	**50.56%**	**58.94%**	**67.29%**	**75.66%**	**84.02%**	**92.39%**	**100.75%**	**17.0%**

Chino Basin Production

Note: Chino Basin production rights are calculated from July through June.

Yearly Production Rights = 1232AF

	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Production		0.41	0.17	-	-	-	-	-	-	-	-	-	-	0.57
Cumulative Production for 2022		0.41	0.57	-	-	-	-	-	-	-	-	-	-	
Water Year 21-22														
Cumulative Production	375.70	376.11	376.27	-	-	-	-							376.27
Cumulative Rights	616.00	718.67	821.33	924.00	1,026.67	1,129.33	1,232.00							1,232.00
% of Production Rights 21-22*		**30.53%**	**30.54%**	**30.56%**	**30.57%**	**30.58%**	**30.60%**							
Water Year 22-23														
Cumulative Production								-	-	-	-	-	-	-
Cumulative Rights								102.67	205.33	308.00	410.67	513.33	616.00	1,232.00
% of Production Rights 22-23*								**-**	**-**	**-**	**-**	**-**	**-**	

* - Out months are Exponential Smoothing (ETS) forecasts based on basin production to date

Chino Basin	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	WY19-20
Water Year 19-20													
Cumulative Production	5.24	110.22	227.03	351.18	470.30	470.30	470.53	470.80	470.80	471.09	486.34	614.43	
Cumulative Rights	102.67	205.33	308.00	410.67	513.33	616.00	718.67	821.33	924.00	1,026.67	1,129.33	1,232.00	1,232.00
% of Production Rights 19-20	5.10%	53.68%	73.71%	85.51%	91.62%	76.35%	65.47%	57.32%	50.95%	45.89%	43.06%	49.87%	

2022 Production v Consumption

Yearly %	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
	8%	17%	25%	33%	42%	50%	58%	67%	75%	83%	92%	100%

Consumption versus Entitlement, Company Wide **Active Shares**

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Consumption	801.79	827.22	-	-	-	-	-	-	-	-	-	-	
Cumulative Consumption	801.79	1,629.01	-	-	-	-	-	-	-	-	-	-	**1,629.01**
Cumulative Entitlement (straight line)	*1,049.42*	*2,098.84*	-	-	-	-	-	-	-	-	-	-	***12,593***
% of Entitlement*	**6.37%**	**12.94%**	**19.50%**	**26.78%**	**33.44%**	**40.28%**	**47.11%**	**53.92%**	**60.74%**	**67.56%**	**74.38%**	**81.20%**	**12.9%**

Consumption versus Entitlement, Company Wide **Total Shares**

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Consumption	801.79	827.22	-	-	-	-	-	-	-	-	-	-	
Cumulative Consumption	801.79	1,629.01	-	-	-	-	-	-	-	-	-	-	**1,629.01**
Cumulative Entitlement (straight line)	*1,083.33*	*2,166.67*	-	-	-	-	-	-	-	-	-	-	***13,000***
% of Entitlement*	**6.17%**	**12.53%**	**18.89%**	**25.94%**	**32.39%**	**39.01%**	**45.63%**	**52.23%**	**58.84%**	**65.44%**	**72.05%**	**78.66%**	**12.5%**

Production versus Consumption, Company Wide

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Production	1,391.96	1,043.07	-	-	-	-	-	-	-	-	-	-	2,435.02
Consumption	*801.79*	*827.22*	-	-	-	-	-	-	-	-	-	-	*1,629.01*
Spread	*259.18*	*189.46*	-	-	-	-	-	-	-	-	-	-	*448.64*
Total Consumption	1,060.97	1,016.68	-	-	-	-	-	-	-	-	-	-	2,077.64
Difference	330.99	26.39	-	-	-	-	-	-	-	-	-	-	357.38
% of Production	**23.8%**	**2.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.00%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**14.7%**

Production versus Consumption, Domestic System

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Production	233.30	221.28	-	-	-	-	-	-	-	-	-	-	**454.58**
Consumption	125.24	141.67	-	-	-	-	-	-	-	-	-	-	**266.92**
Monthly Difference	108.05	79.61	-	-	-	-	-	-	-	-	-	-	**187.66**
% difference	**86.28%**	**56.19%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**70.3%**

Production versus Consumption, Irrigation System

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Production	*1,125.08*	*788.88*	-	-	-	-	-	-	-	-	-	-	***1,913.96***
Addition from Domestic	*108.05*	*79.61*	-	-	-	-	-	-	-	-	-	-	***187.66***
Total Production	1,233.14	868.49	-	-	-	-	-	-	-	-	-	-	**2,101.62**
Consumption	935.72	875.01	-	-	-	-	-	-	-	-	-	-	**1,810.73**
Monthly Difference	297.41	(6.52)	-	-	-	-	-	-	-	-	-	-	**290.89**
% difference	**31.78%**	**-0.74%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**16.1%**

* - Out months are Exponential Smoothing (ETS) forecasts based on consumption to date

2022 Consumption Analysis

Yearly %	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
	8%	17%	25%	33%	42%	50%	58%	67%	75%	83%	92%	100%

COMPANY TOTALS **Active Shares**

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Consumption	801.79	827.22	-	-	-	-	-	-	-	-	-	-	
Cumulative Consumption	801.79	1,629.01	-	-	-	-	-	-	-	-	-	-	**1,629.01**
Cumulative Entitlement	985.35	1,970.71	-	-	-	-	-	-	-	-	-	-	**12,593.05**
% of Yearly Entitlement*	**6.37%**	**12.94%**	**19.50%**	**26.78%**	**33.44%**	**40.28%**	**47.11%**	**53.92%**	**60.74%**	**67.56%**	**74.38%**	**81.20%**	**12.94%**

Shares	6,189

COMPANY TOTALS **All Shares**

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Consumption	801.79	827.22	-	-	-	-	-	-	-	-	-	-	
Cumulative Consumption	801.79	1,629.01	-	-	-	-	-	-	-	-	-	-	**1,629.01**
Cumulative Entitlement	1,083.33	2,166.67	-	-	-	-	-	-	-	-	-	-	**13,000.00**
% of Yearly Entitlement*	**6.17%**	**12.53%**	**18.89%**	**25.94%**	**32.39%**	**39.01%**	**45.63%**	**52.23%**	**58.84%**	**65.44%**	**72.05%**	**78.66%**	**12.53%**

Shares	6,389

San Antonio Heights

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Consumption	64.71	86.42	-	-	-	-	-	-	-	-	-	-	
Cumulative Consumption	64.71	151.13	-	-	-	-	-	-	-	-	-	-	**151.13**
Cumulative Entitlement	69.41	138.82	-	-	-	-	-	-	-	-	-	-	**1,285.96**
% of Yearly Entitlement*	**5.03%**	**11.75%**	**18.47%**	**25.91%**	**32.72%**	**39.72%**	**46.71%**	**53.68%**	**60.66%**	**67.63%**	**74.61%**	**81.59%**	**11.75%**

Shares	632

City of Upland

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Consumption	620.47	629.06	-	-	-	-	-	-	-	-	-	-	
CumulativeConsumption	620.47	1,249.53	-	-	-	-	-	-	-	-	-	-	**1,249.53**
Cumulative Entitlement	765.83	1,531.66	-	-	-	-	-	-	-	-	-	-	**9,189.94**
% of Yearly Entitlement*	**6.75%**	**13.60%**	**20.44%**	**28.02%**	**34.96%**	**42.09%**	**49.21%**	**56.30%**	**63.41%**	**70.52%**	**77.62%**	**84.73%**	**13.60%**

Shares	4,516.50

Monte Vista Water District

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Consumption	56.52	39.60	-	-	-	-	-	-	-	-	-	-	
CumulativeConsumption	56.52	96.12	-	-	-	-	-	-	-	-	-	-	**96.12**
Cumulative Entitlement	56.04	112.08	-	-	-	-	-	-	-	-	-	-	**672.48**
% of Yearly Entitlement*	**8.40%**	**14.29%**	**20.18%**	**26.70%**	**32.67%**	**38.80%**	**44.93%**	**51.03%**	**57.15%**	**63.26%**	**69.37%**	**75.49%**	**14.29%**

Shares	331

City of Ontario

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Consumption	39.60	35.10	-	-	-	-	-	-	-	-	-	-	
CumulativeConsumption	39.60	74.70	-	-	-	-	-	-	-	-	-	-	**74.70**
Cumulative Entitlement	50.06	100.13	-	-	-	-	-	-	-	-	-	-	**600.76**
% of Yearly Entitlement*	**6.59%**	**12.43%**	**18.28%**	**24.75%**	**30.67%**	**36.75%**	**42.83%**	**48.89%**	**54.95%**	**61.02%**	**67.08%**	**73.15%**	**12.43%**

Shares	295

* - Out months are Exponential Smoothing (ETS) forecasts based on consumption to date

2022 Consumption Analysis

Yearly %	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
	8%	17%	25%	33%	42%	50%	58%	67%	75%	83%	92%	100%

Cucamonga Valley Water District

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Consumption	-	-	-	-	-	-	-	-	-	-	-	-	
CumulativeConsumption	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Cumulative Entitlement	-	-	-	-	-	-	-	-	-	-	-	-	**8.14**
% of Yearly Entitlement*													

Shares	4

Holiday Rock Company

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Consumption	12.41	18.51	-	-	-	-	-	-	-	-	-	-	
CumulativeConsumption	12.41	30.92	-	-	-	-	-	-	-	-	-	-	**30.92**
Cumulative Entitlement	14.52	29.05	-	-	-	-	-	-	-	-	-	-	**269.10**
% of Yearly Entitlement*	**4.61%**	**11.49%**	**18.37%**	**25.99%**	**32.96%**	**40.12%**	**47.28%**	**54.41%**	**61.56%**	**68.70%**	**75.84%**	**82.98%**	**11.49%**

Shares	132

Red Hills Golf Course

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Consumption	7.09	16.60	-	-	-	-	-	-	-	-	-	-	
CumulativeConsumption	7.09	23.70	-	-	-	-	-	-	-	-	-	-	**23.70**
Cumulative Entitlement	23.97	47.94	-	-	-	-	-	-	-	-	-	-	**444.08**
% of Yearly Entitlement*	**1.60%**	**5.34%**	**9.07%**	**13.21%**	**17.00%**	**20.90%**	**24.79%**	**28.66%**	**32.55%**	**36.43%**	**40.31%**	**44.19%**	**5.34%**

Shares	218

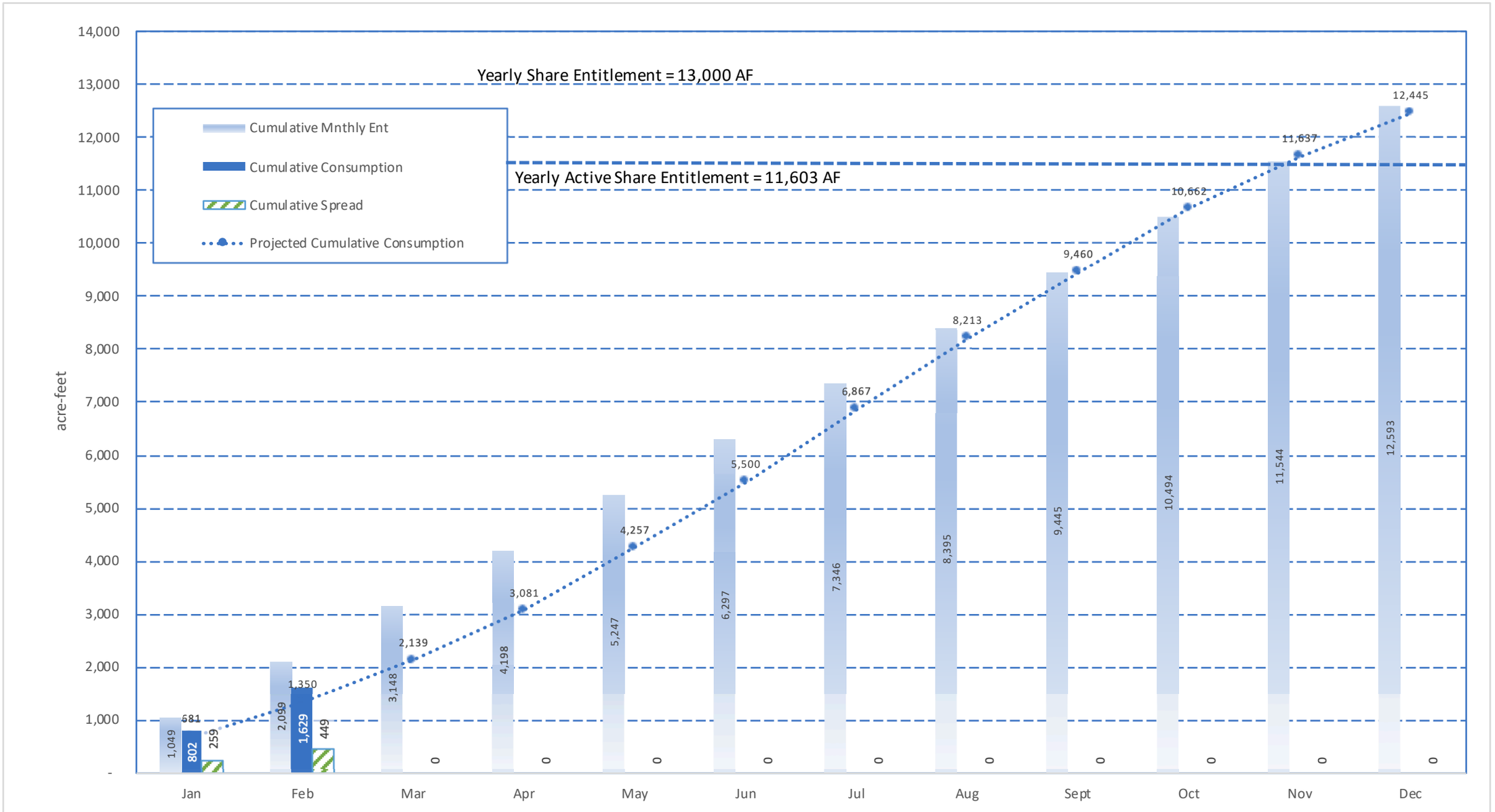
Minor Irrigators

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	THIS YEAR
Consumption	0.93	1.76	-	-	-	-	-	-	-	-	-	-	
CumulativeConsumption	0.93	2.69	-	-	-	-	-	-	-	-	-	-	**2.69**
Cumulative Entitlement	5.52	11.04	-	-	-	-	-	-	-	-	-	-	**102.25**
% of Yearly Entitlement*	**0.91%**	**2.63%**	**4.35%**	**6.25%**	**7.99%**	**9.78%**	**11.57%**	**13.35%**	**15.14%**	**16.92%**	**18.70%**	**20.49%**	**2.63%**

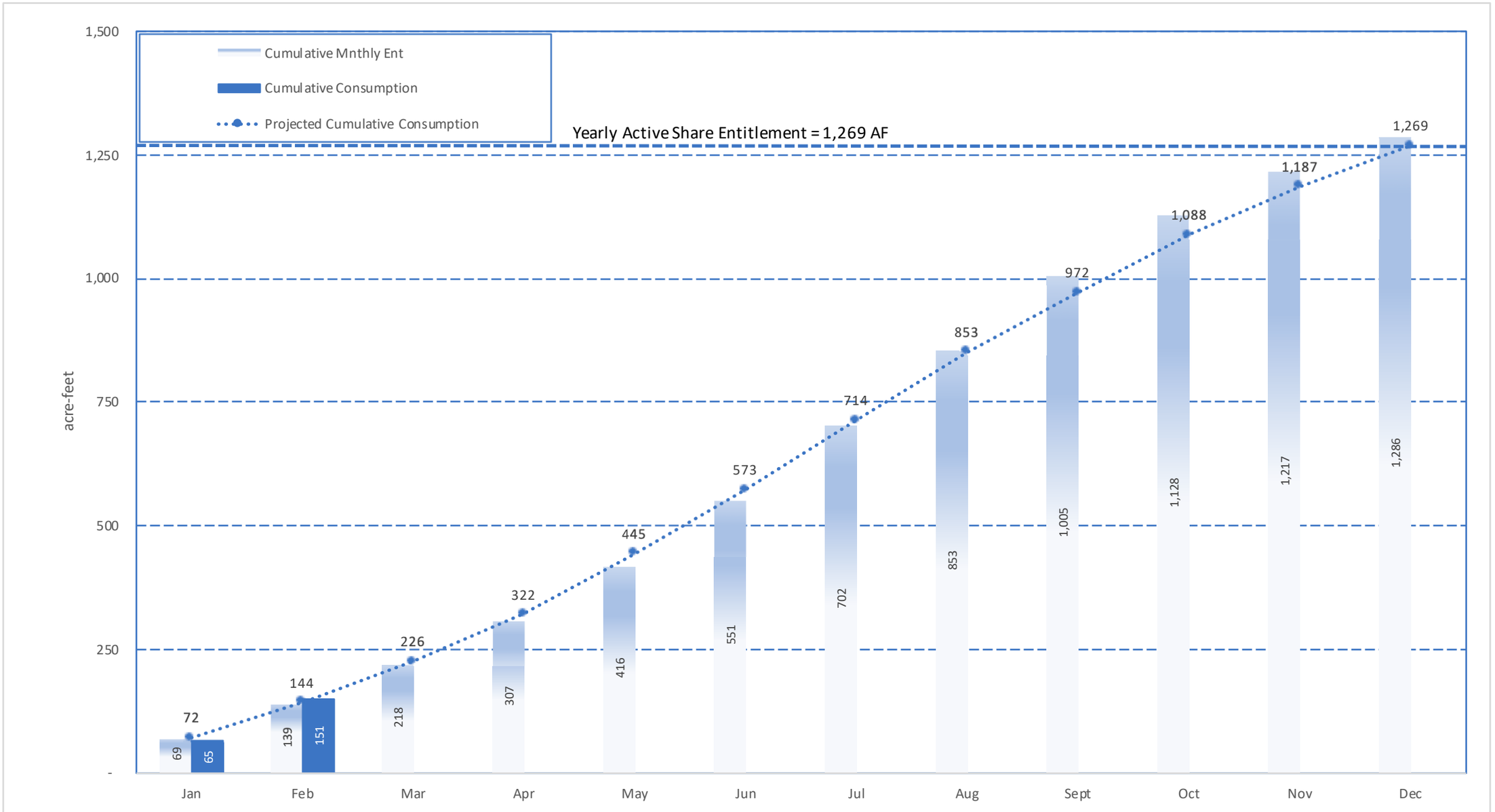
Shares	50

* - Out months are Exponential Smoothing (ETS) forecasts based on consumption to date

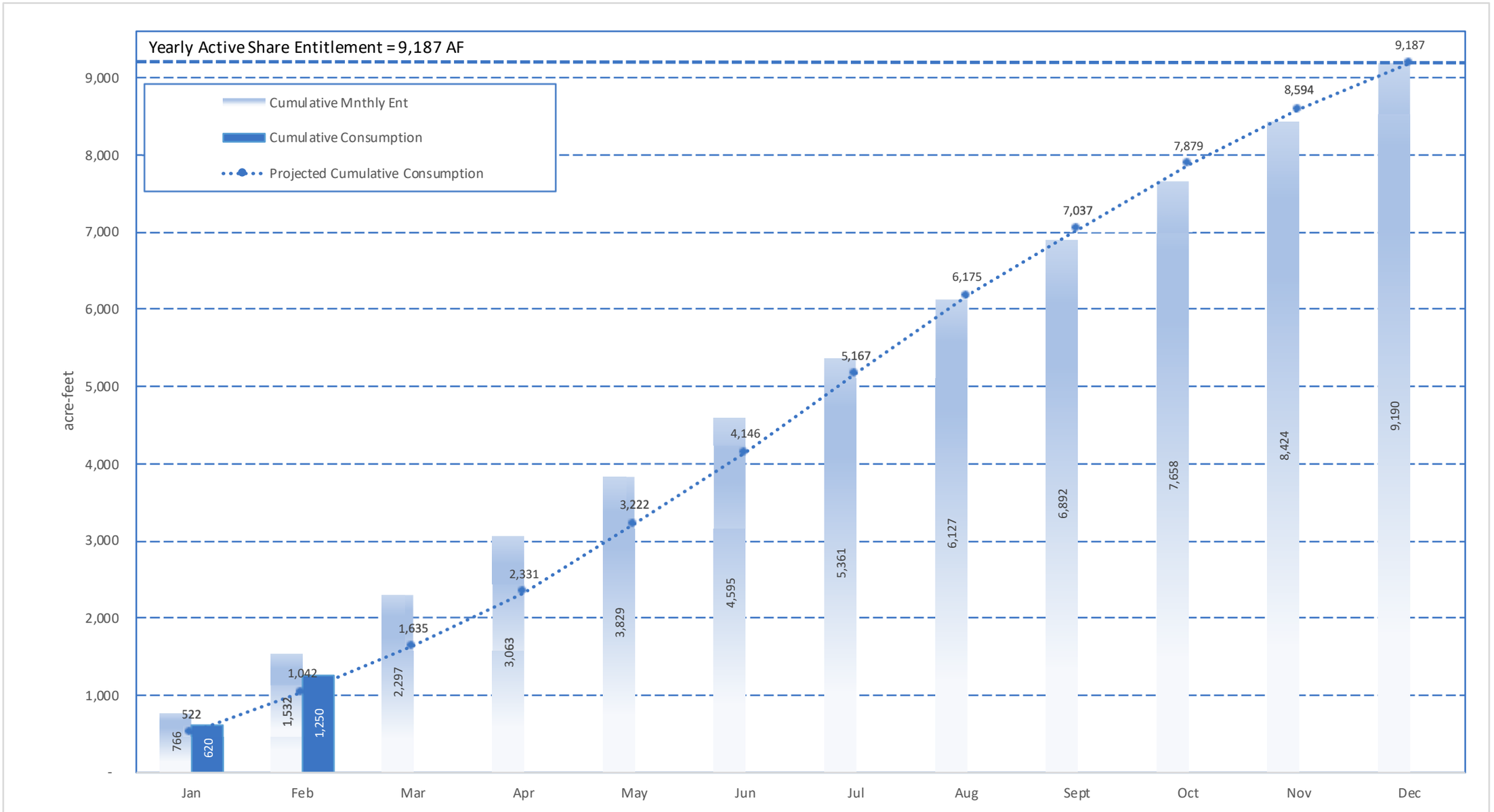
2022 Consumption Chart



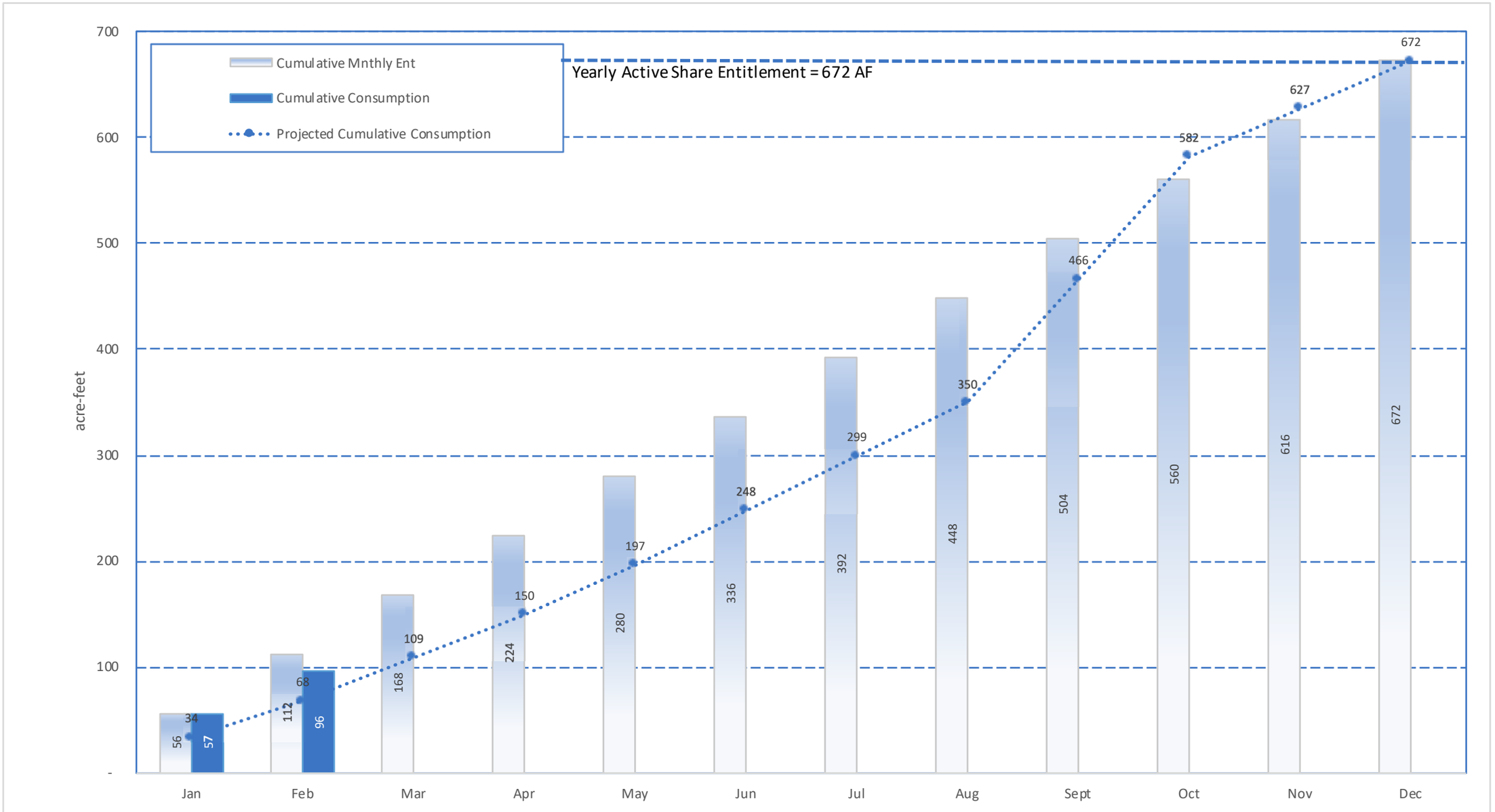
2022 Domestic Consumption



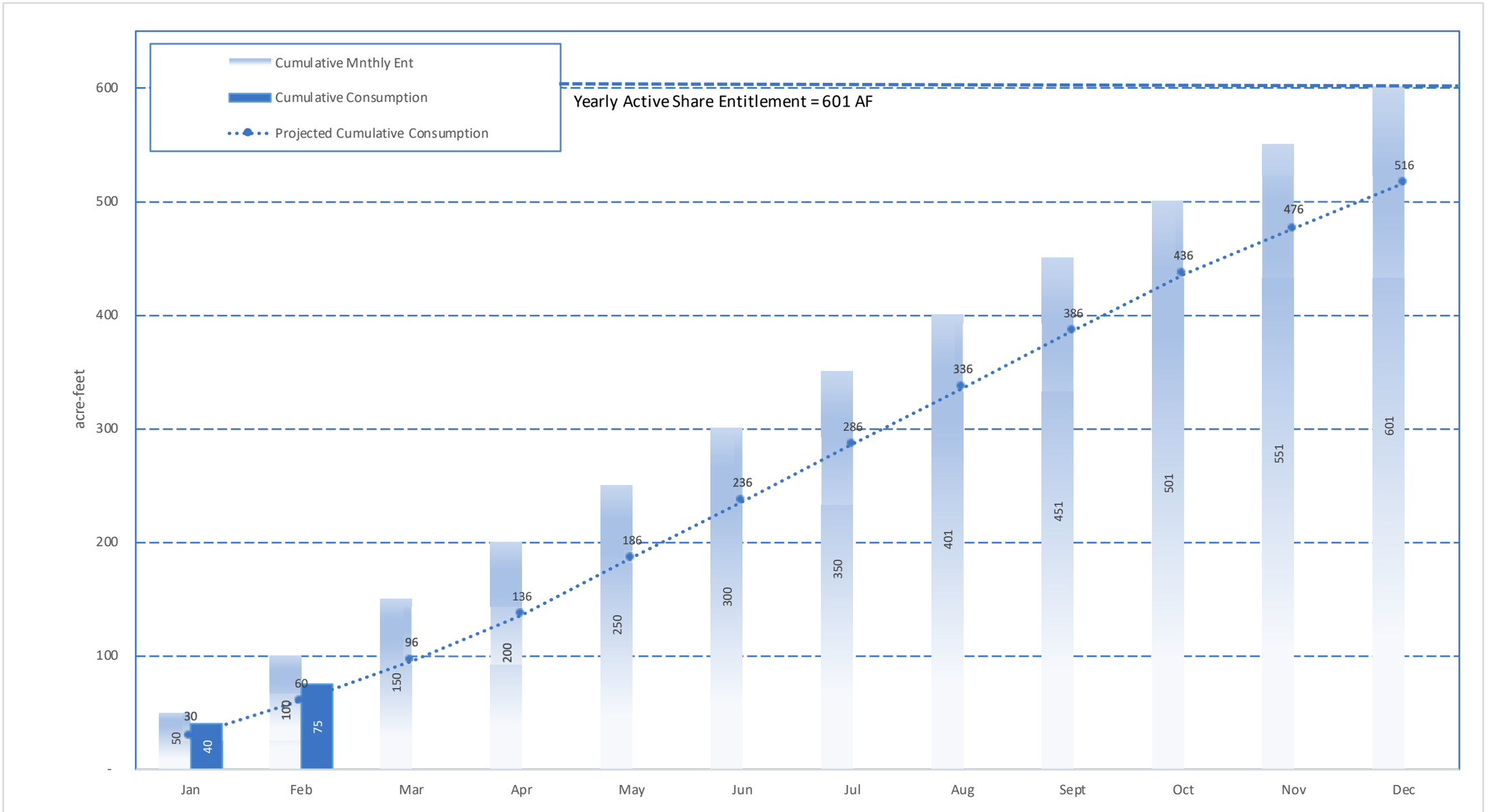
2022 Upland Consumption



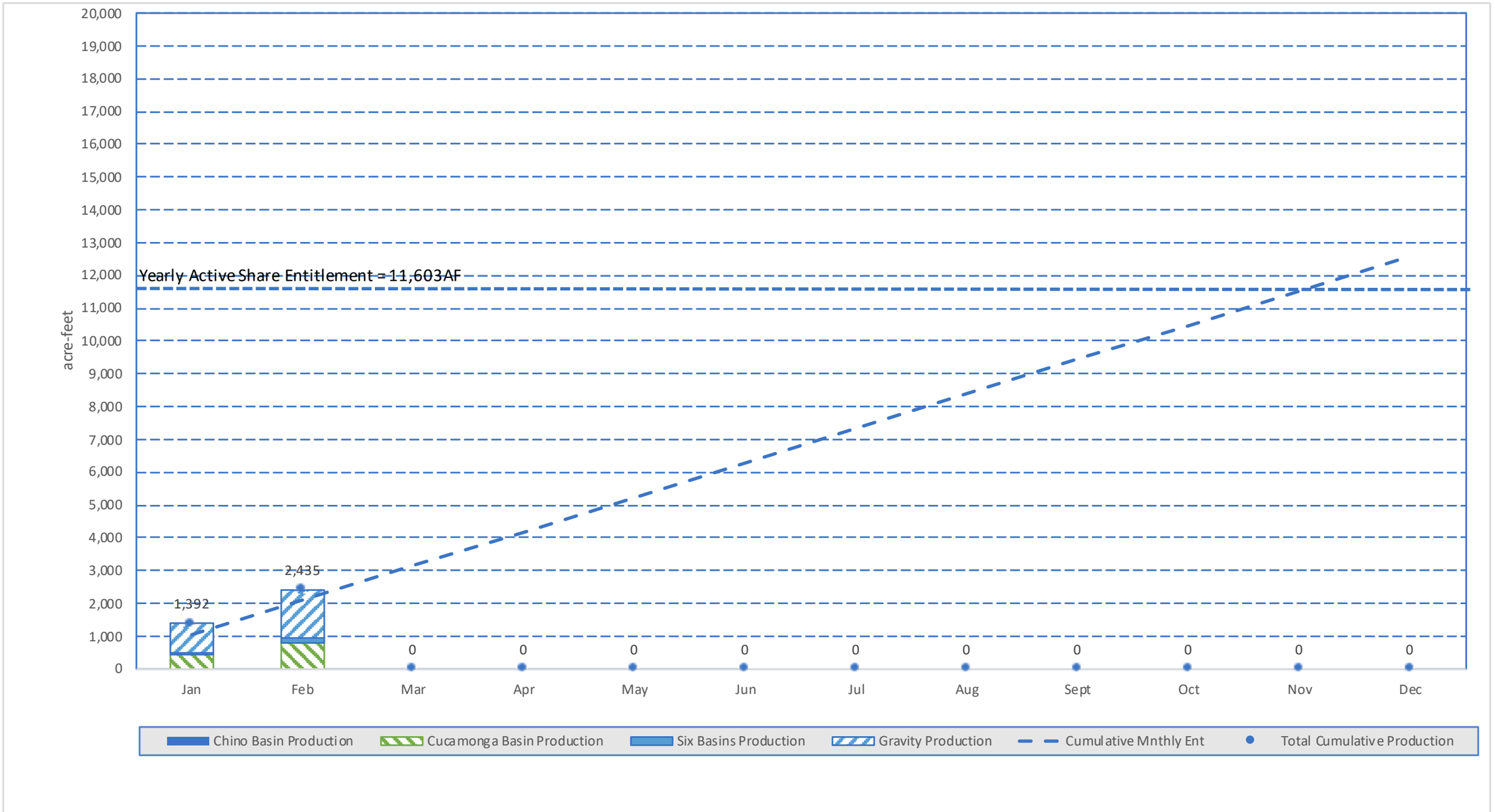
2022 Monte Vista Consumption



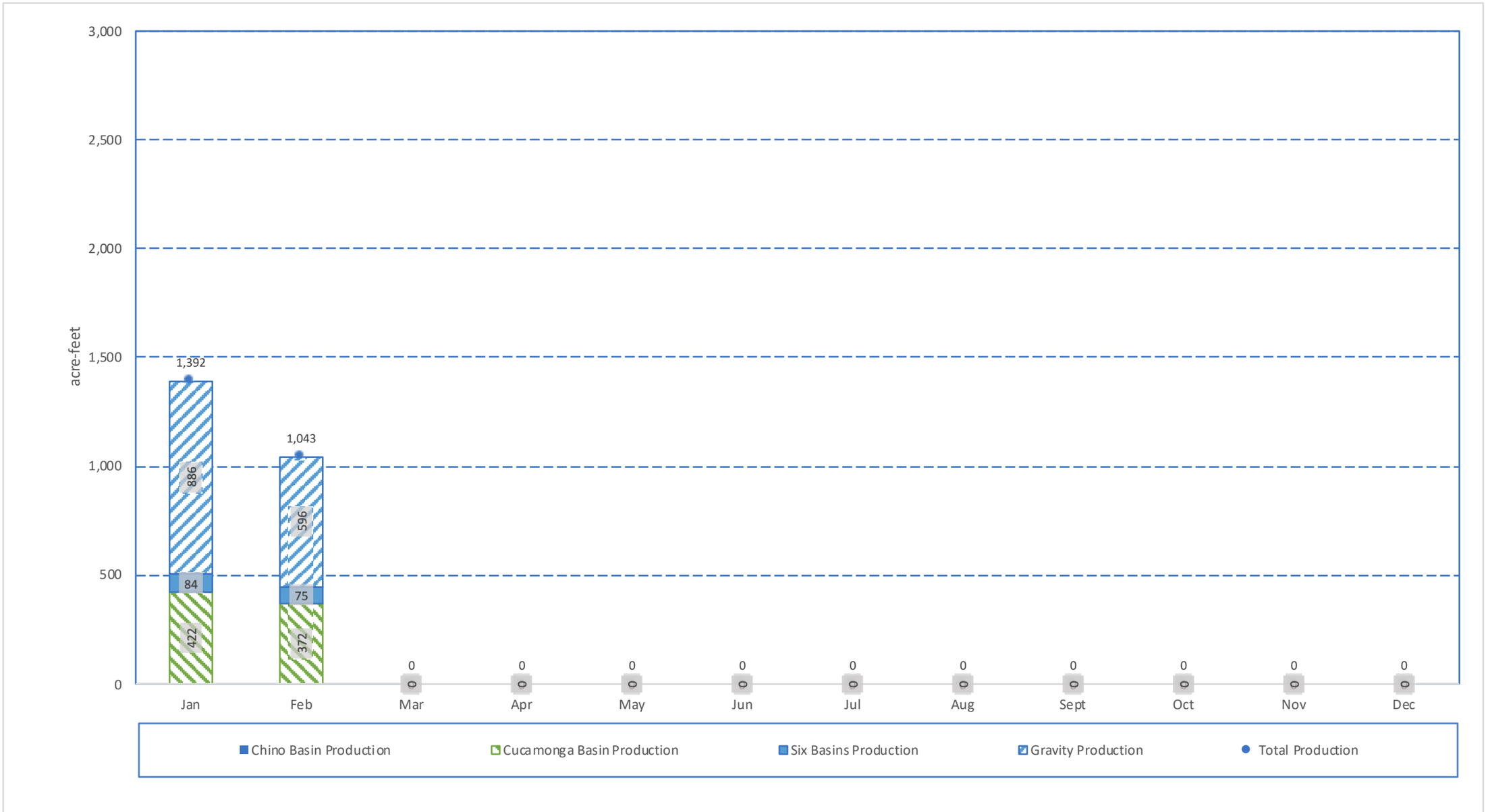
2022 Ontario Consumption



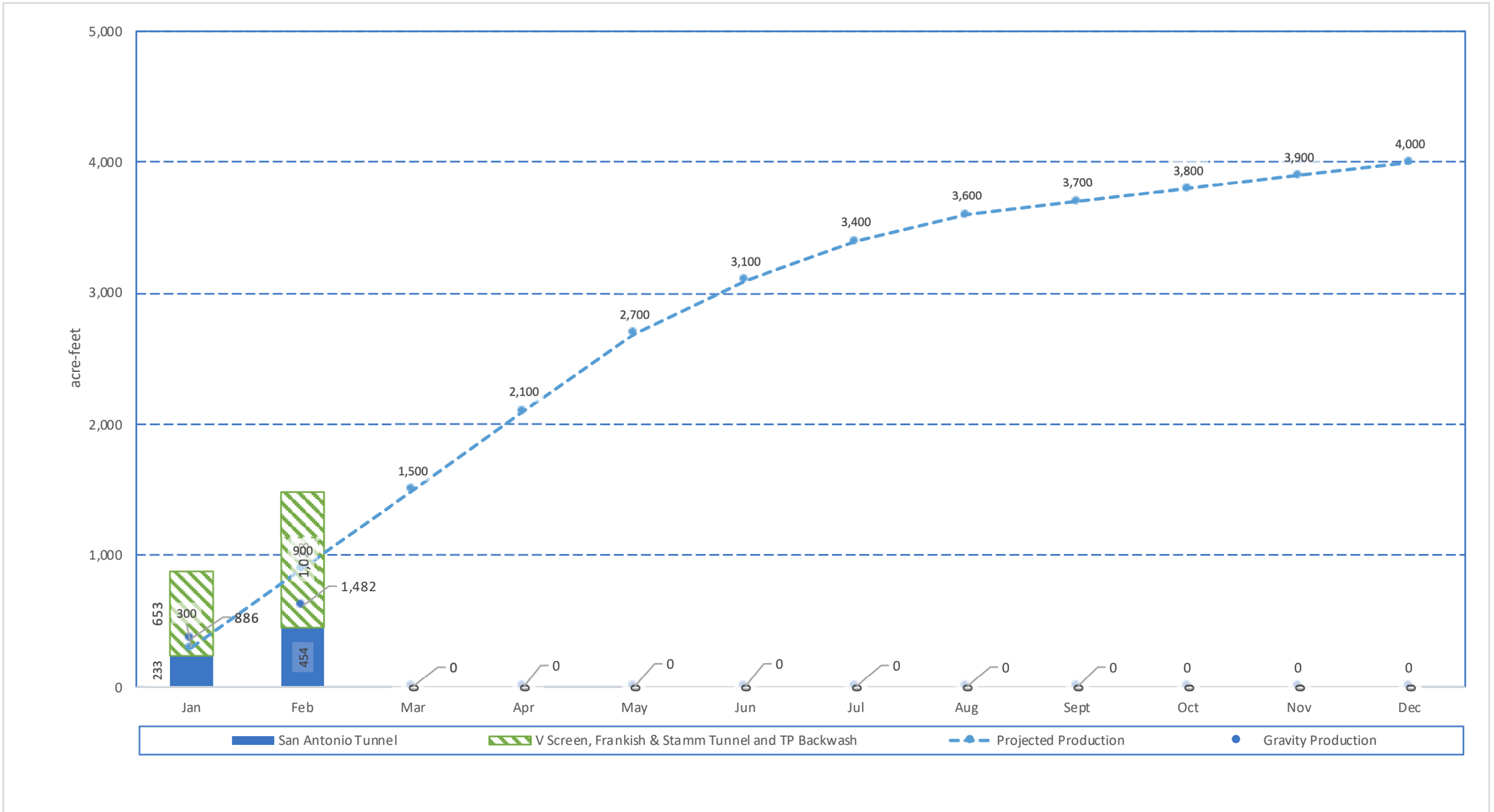
2022 Total Yearly Production



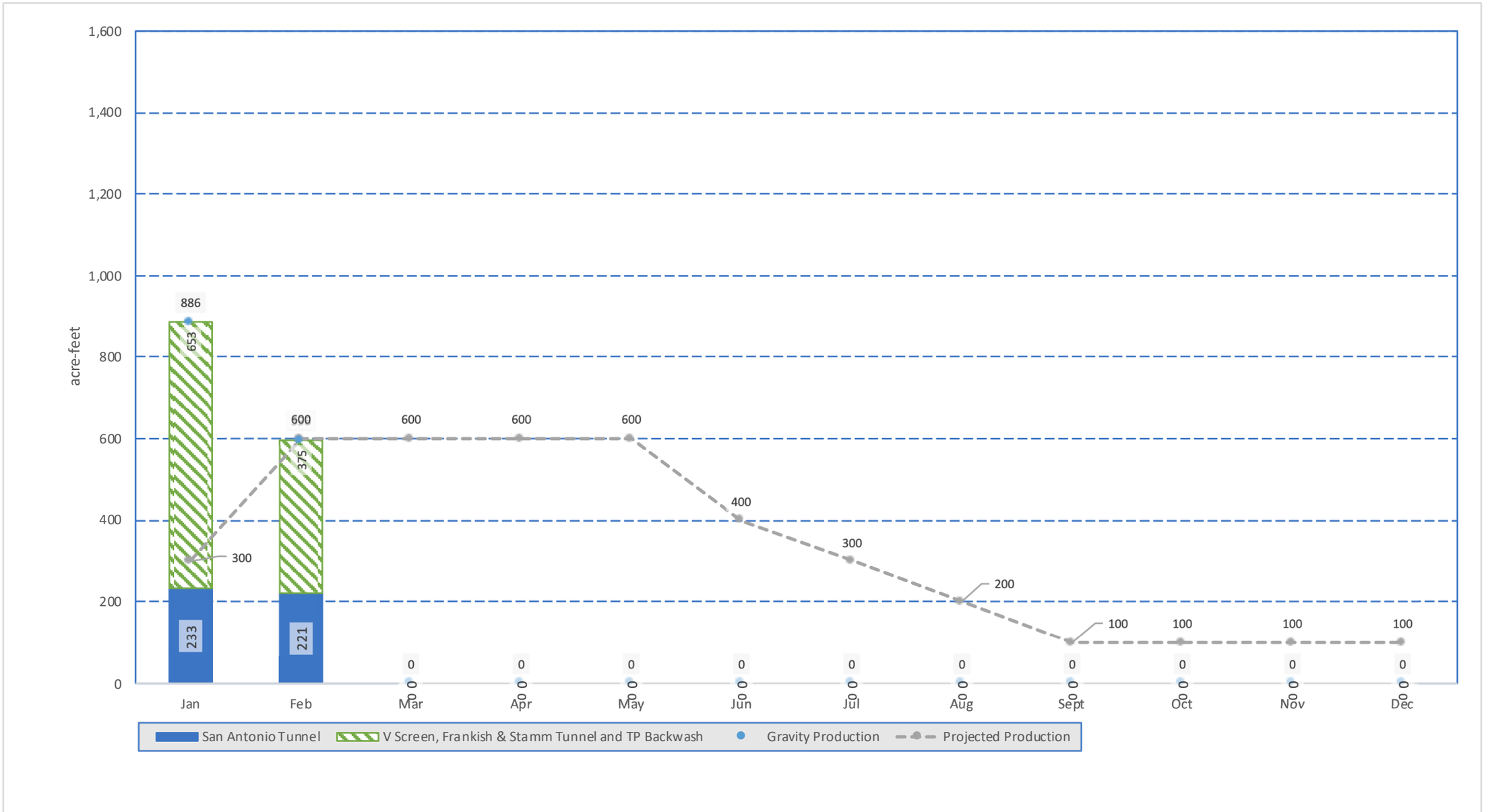
2022 Monthly Production



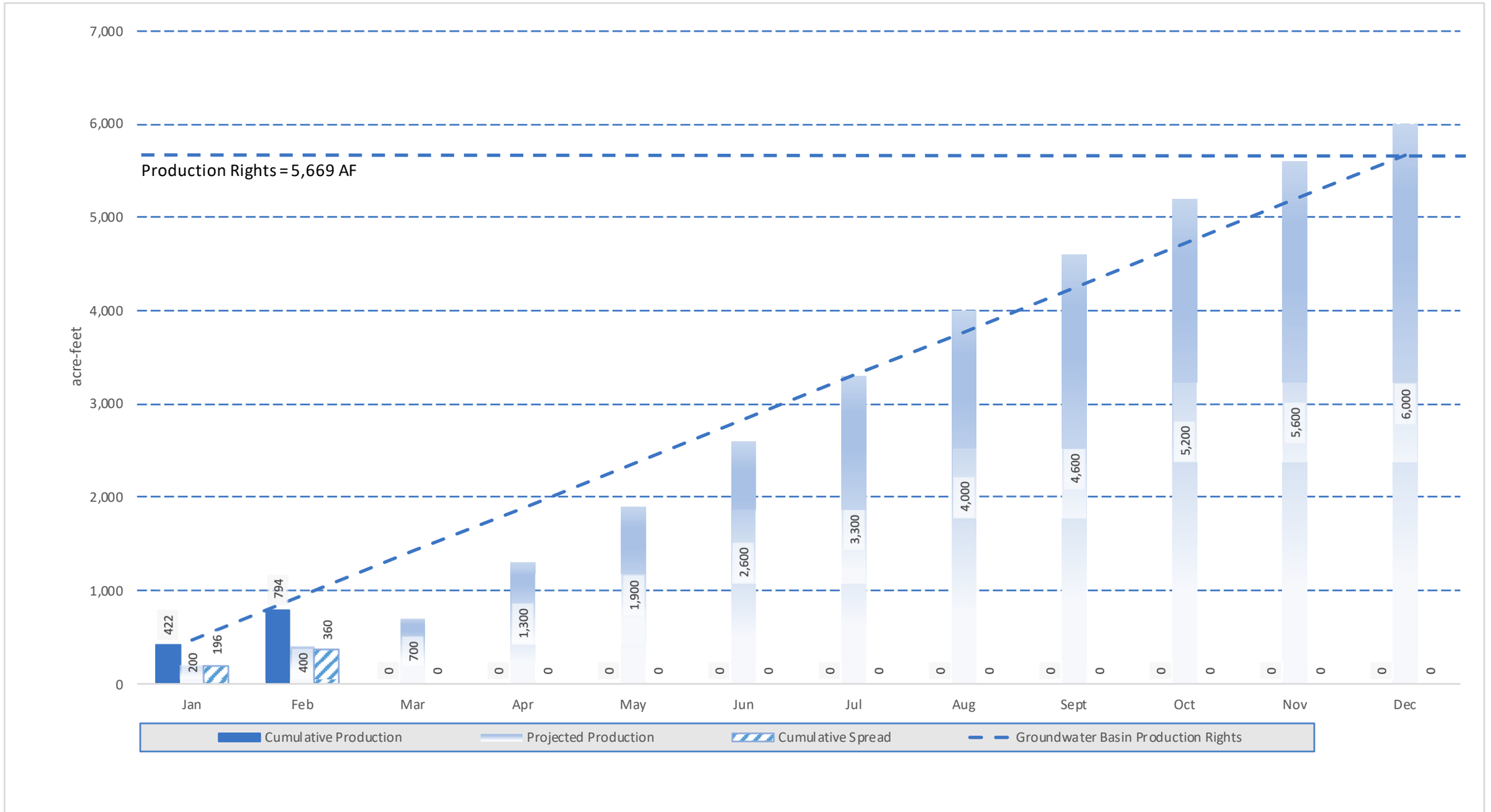
2022 Gravity Cumulative



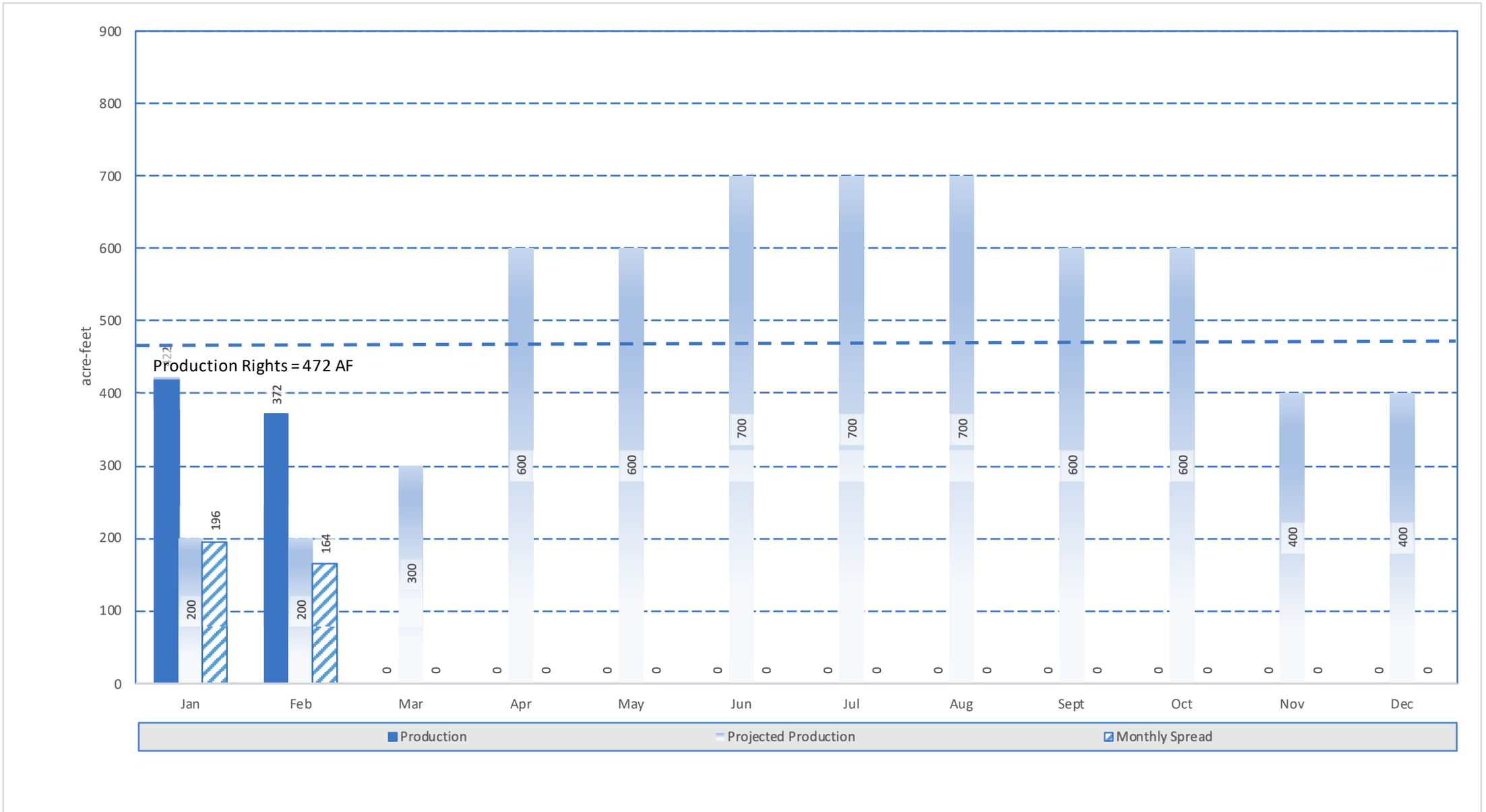
2022 Gravity Monthly



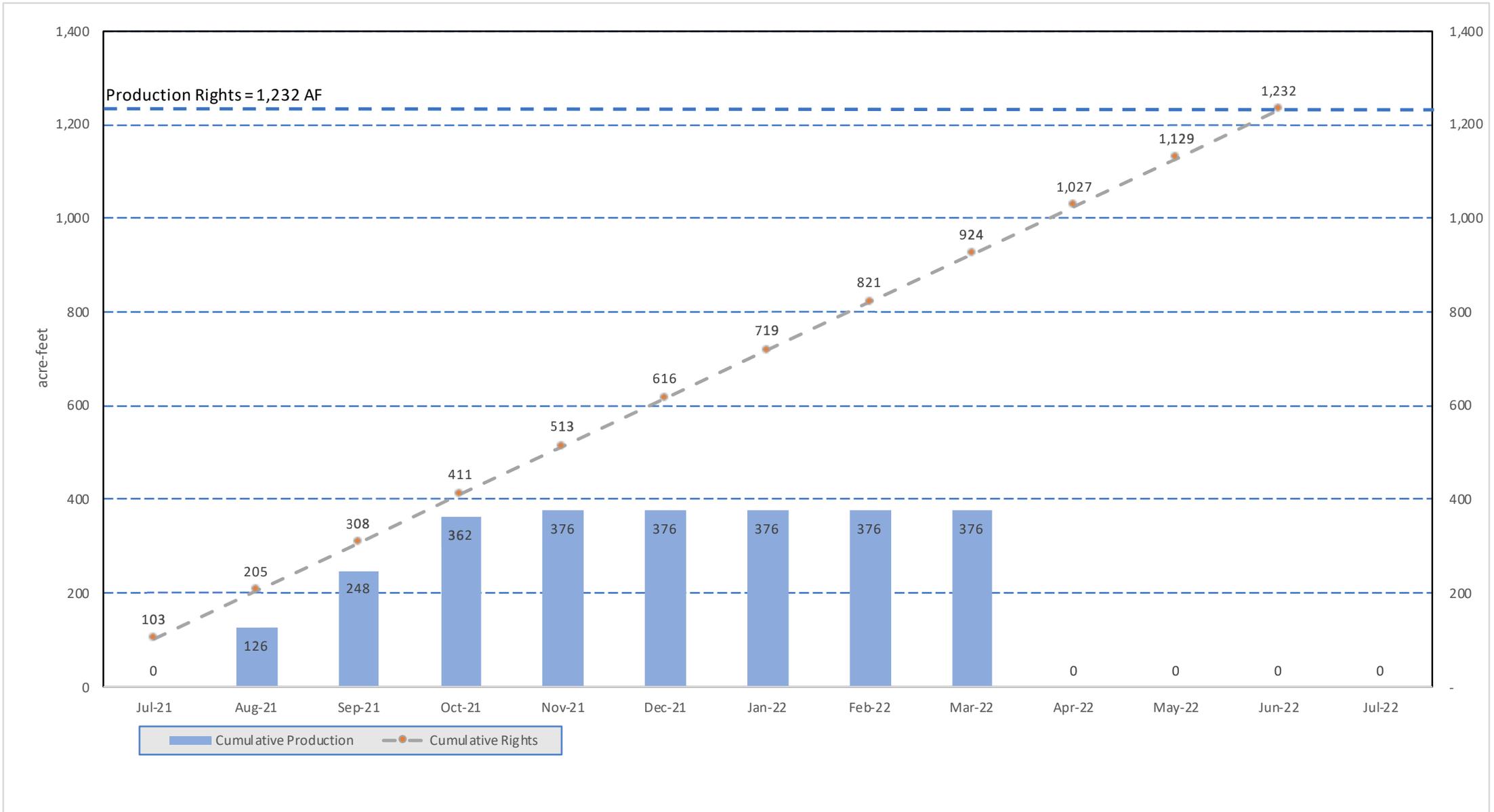
2022 Cucamonga Basin Cumulative



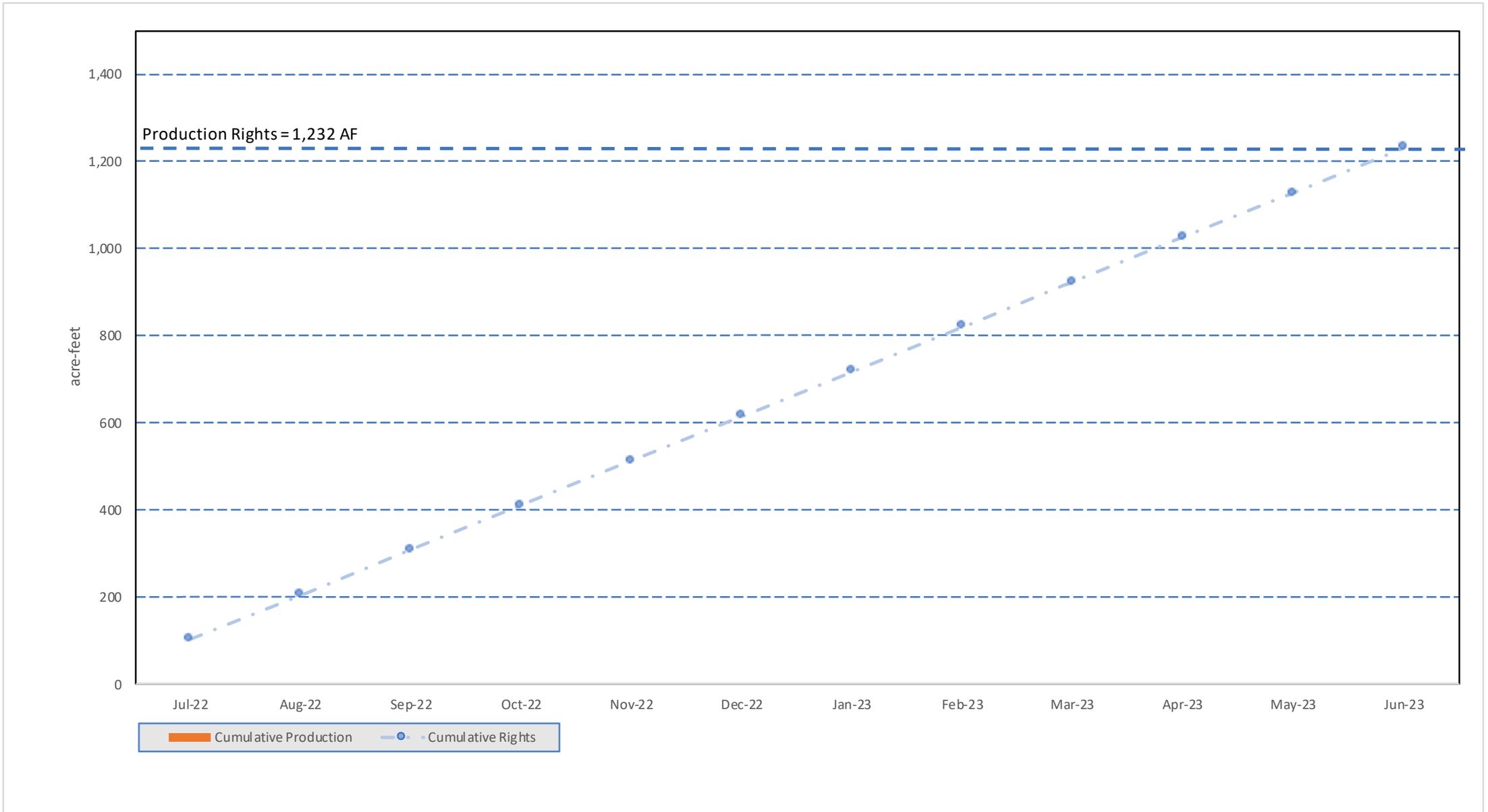
2022 Cucamonga Basin Monthly



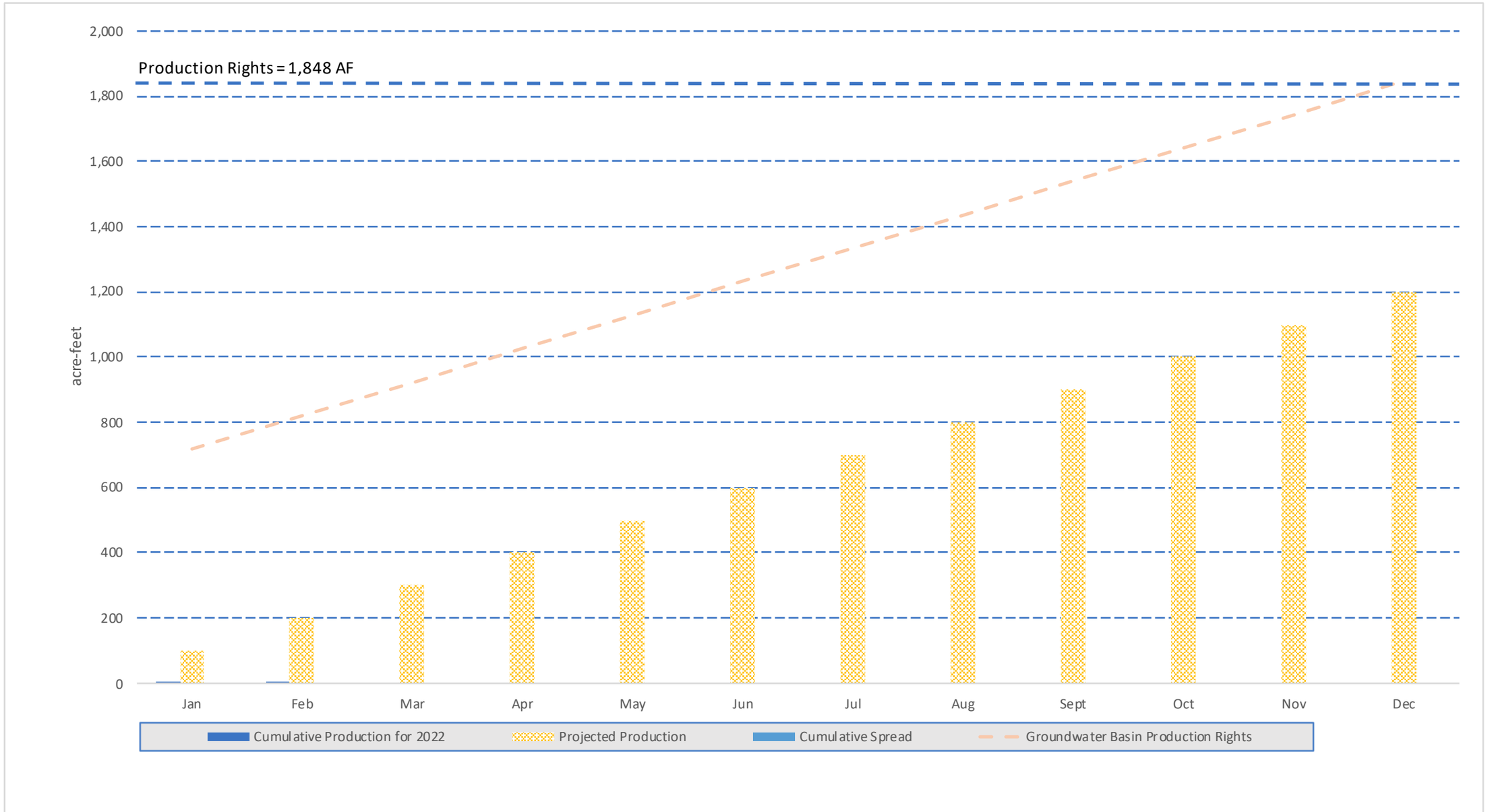
21-22 Chino Basin Cumulative



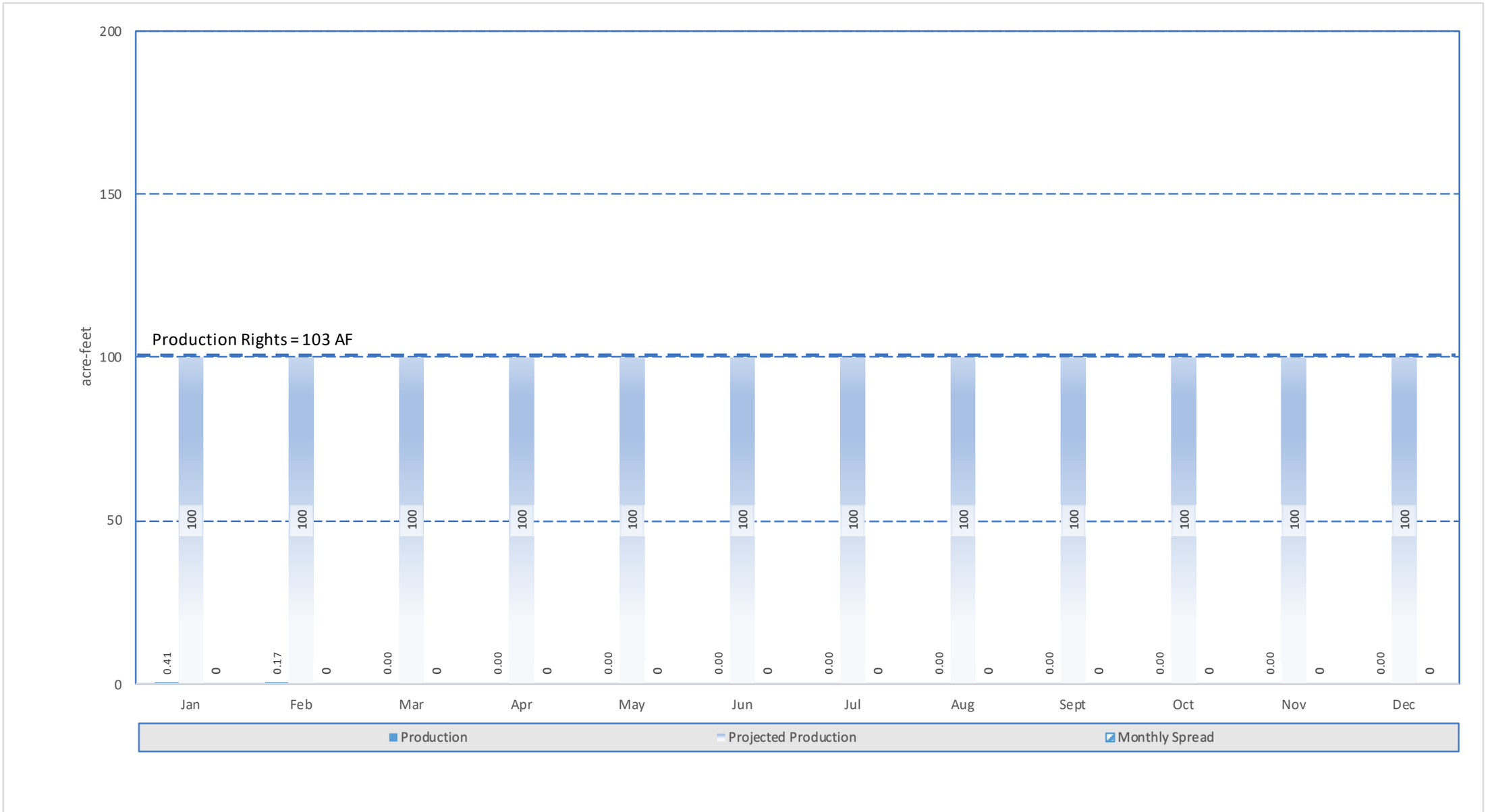
22-23 Chino Basin Cumulativ



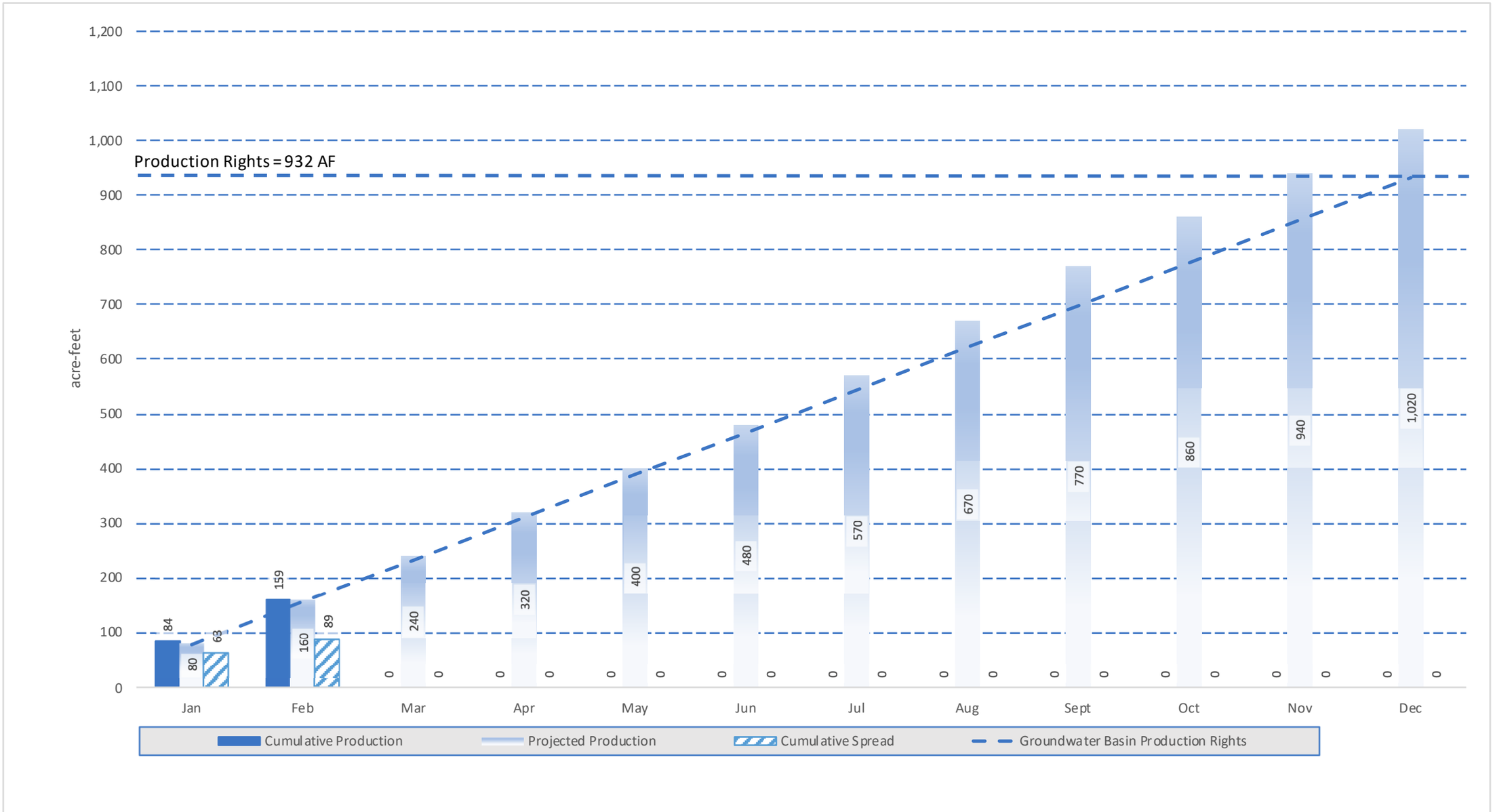
2022 Chino Basin Cumulative



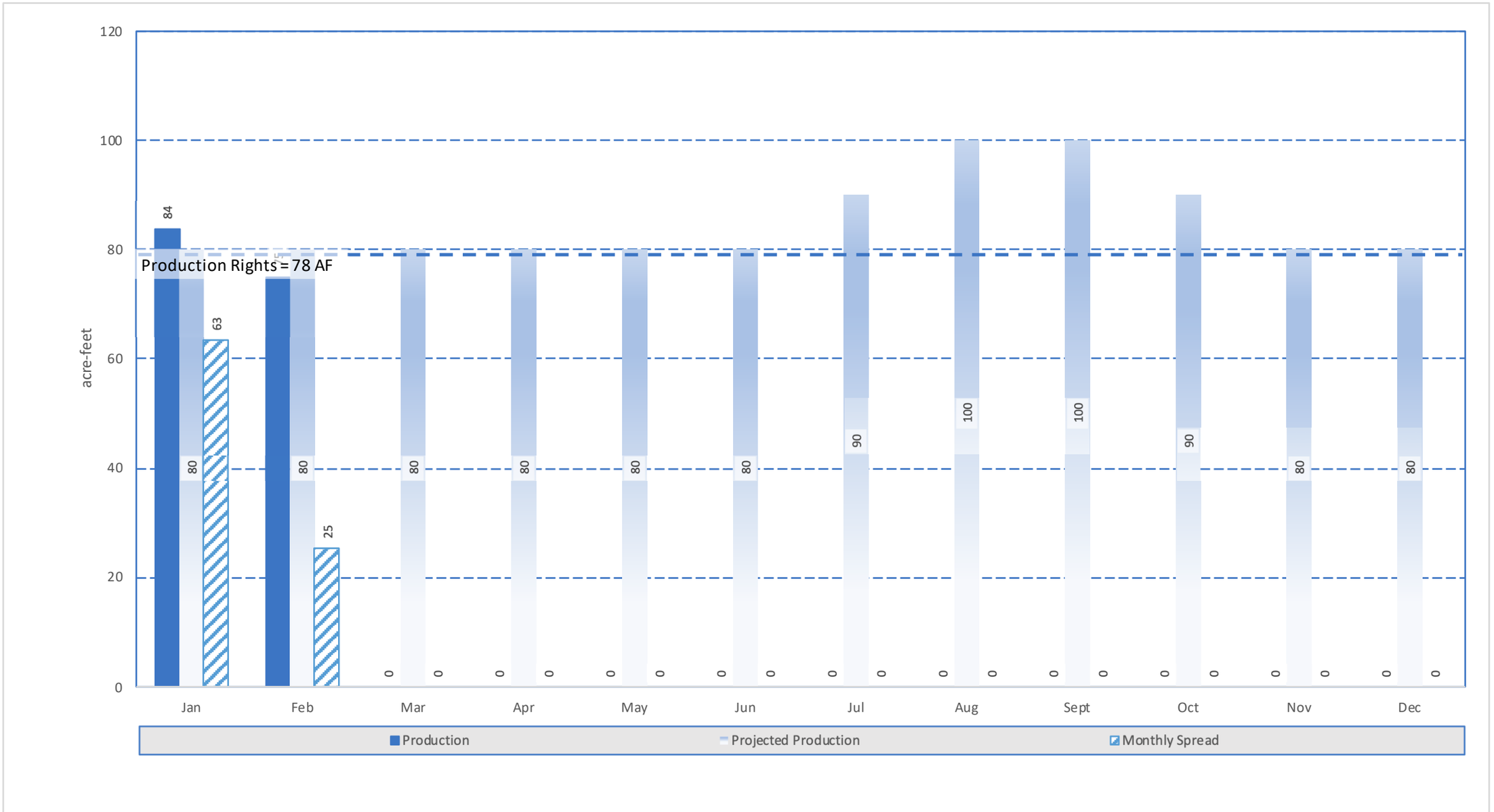
2022 Chino Basin Monthly



2022 Six Basins Cumulative



2022 Six Basins Monthly



Prominent Issues Report

Agenda Item No. 4G
Agenda Date: March 15, 2022

A. Water Supply through February 2022

- Annual entitlement for CY2022 is 13,000 AF
  - Cumulative yearly production was 2,435 AF
  - Cumulative yearly consumption was 1,629 AF
  - Cumulative yearly spread was 449 AF
  - Cumulative unaccounted water was 357 AF

Six Basins Production for 2022

- Annual production right is 932 AF.
- Cumulative production was 159 AF.
  Production is sent to the WFA treatment facility to meet City of Ontario and MVWD entitlement.
- The Company spread a total of 89 AF.

Cucamonga Basin Production for 2022

- Annual production right is 5,669 AF.
- Cumulative production was 794 AF.
- The Company spread a total of 360 AF.

Chino Basin Production for 2022

- Annual production right is 1,232 AF.
- Cumulative production was 1 AF.
- The Company spread a total of 0 AF.

Surface Water (San Antonio Creek) flow for 2022
Total flow was 859 AF.

Tunnel flow for 2022
San Antonio Tunnel flow was 454 AF. Frankish and Stamm Tunnel flow was 86 AF.

B. Company Stock
A total of ¼ share of water stock moved from active to dormant this transfer period while ½ share of water stock moved from dormant to active

C. Communication and Information Activities
"Facebook" - 179 friends liking our old FB page and 71 customers have liked our new FB page. No new communication posted on the new page and no new communication on the old Facebook page. Facebook is not able to merge the two Facebook pages; therefore, we are in discussion of possibly deleting the old page.

D. Administration Matters

Meetings of interest:

- Thu, Feb 17 – GM virtually hosted Quarterly Water Coordination Meeting w/ municipal shareholders
- Thu, Feb 17 – GM virtually attended AP Confidential Session and CBWM Advisory Committee
- Tue, Feb 22 – GM virtually attended IEUA WUE Flex Form Discussion
- Wed, Feb 23 – GM virtually attended IEUA Joint Water Manager's Drought Task Force
- Thu, Feb 24 – GM virtually attended AP Confidential Session and CBWM Board Meeting
- Fri, Feb 25 – GM and Ops Sup visited Red Hills Golf Course to review their system
- Thu, Mar 10 - GM virtually attended AP Confidential Session and Open Meeting

E. Groundwater Basin Matters

Chino Basin -

Spread Water from SAWCo - Application to spread 1,500 AF per year for years 21/22 through 25/26 was approved by WM Board in July. We have not yet spread any water in 21/22.

Ag Pool Contest and Legal Expenses – In May 2017 the Agricultural Pool initiated adversarial proceedings contesting Appropriative Pool storage within the Chino Basin.

The Appropriative Pool has objected to those Ag Pool legal costs being 'expenses' as defined by the Peace Agreement. The courts agreed with the AP.

On July 26th the Ag Pool filed a motion for Attorney's Fees of about half a million dollars.

At a Nov 5th hearing the judge denied Ag Pool's motion for attorney's fees. The order was filed and Ag Pool has appealed.

Additionally, Chino has filed a motion regarding reimbursement of funds from Ag Pool back to CBWM and AP. The motion was originally scheduled to be heard on February 4th, 2022. However, at the start of the hearing the Ag Pool attorney improperly stated that settlement terms between the Ag Pool and AP were reached or within reach. This statement prompted the judge to defer the hearing until April, hoping the pools could reach a settlement before then.

Six Basins –

A meeting was held on February 23, 2022. Regarding the San Antonio Spreading Grounds (SASG) Improvements Implementation, the Watermaster Board approved directing staff to (1) coordinate with the PVPA and USACE during the next recharge event and (2) develop an implementation plan for the construction of a recharge basin in the northwestern portion of the San Antonio Spreading Grounds.

A draft Six Basins Watermaster Annual Report for CY 2021 was presented. All comments on the draft report were due March 10, 2022.

The next meeting is scheduled for March 23, 2022 and will be held virtually.

Cucamonga Basin –

The working group met virtually throughout the month of February.

CVWD has received Basin Model data from West Yost.

An RFQ / RFP process has been initiated by the Basin representatives for future engineering/ hydrogeologic work. Based on the responses to the RFQ, three firms were shortlisted to continue with the RFP process. An addendum to the Request for Proposal was discussed and feedback was given by all the parties. No change to the current schedule was made. Proposals were received from all three consultants by the Oct 12 deadline.

Proposals were reviewed and discussed. Interviews were held with all three firms. From the interviews two firms were selected to continue the process. One additional interview for each of the two firms was held on February 1st. ~~The Basin members are still weighing a final decision.~~ After many discussions the working group has tentatively selected Provost and Prichard represent the Cucamonga Basin Watermaster. More details will be provided at next month's Board meeting.

Ten-Year Forecast

IEUA Presentation to Retail GMs, Feb 28, 2022

Rates & Charges Effective January 1st	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Tier 1 Supply Rate ($/AF)	$243	$328	$348	$371	$403	$427	$455	$473	$491	$510	$520
Tier 2 Supply Rate ($/AF)	$285	$532	$538	$573	$603	$627	$652	$671	$688	$705	$723
System Access Rate ($/AF)*	$389	$373	$416	$429	$442	$470	$502	$533	$564	$598	$635
System Power Rate ($/AF)*	$167	$187	$188	$201	$210	$219	$223	$227	$240	$253	$257
Full Service Untreated Volumetric Cost ($/AF)	SAWCO charges $296 / AF for Untreated Water										
Tier 1	$799	$888	$952	$1,001	$1,055	$1,116	$1,180	$1,233	$1,295	$1,361	$1,412
Tier 2	$841	$1,092	$1,142	$1,203	$1,255	$1,316	$1,377	$1,431	$1,492	$1,556	$1,615
Treatment Surcharge ($/AF)	$344	$364	$370	$394	$421	$436	$443	$453	$463	$473	$503
Full Service Treated Volumetric Cost ($/AF)	SAWCO charges $296 / AF for Treated Water										
Tier 1	$1,143	$1,252	$1,322	$1,395	$1,476	$1,552	$1,623	$1,686	$1,758	$1,834	$1,915
Tier 2	$1,185	$1,456	$1,512	$1,597	$1,676	$1,752	$1,820	$1,884	$1,955	$2,029	$2,118
Readiness-to-Serve Charge ($M)	$140	$145	$183	$183	$183	$183	$188	$207	$225	$241	$271
Capacity Charge ($/cfs)	$12,200	$10,700	$11,700	$13,600	$14,700	$16,000	$18,200	$21,600	$22,900	$24,500	$25,600

* This rate element is currently included in the price term of the MWD-SDCWA Exchange Agreement

Agenda Item No. 4H

Item Title: Projects and Operations Update

Purpose:

To update the Board and Shareholders on Company capital projects.

Updates:

1507 – Office Relocation

Staff intends to initiate conversations regarding Company plans to either move this project forward or remove it from the books.

1602 – Holly Drive Reservoir, Phase 3

Proposed construction of a second 120,000-gallon tank at the Holly Drive Tank site. Proposal to be discussed at tonight's meeting.

1902 – Cucamonga Crosswalls Mitigation

TKE Engineering is working with staff to close out certain State and Federal Permits. Staff is also looking into long-term maintenance permits that will allow the Company yearly access to the site for clearing and grubbing.

1905 – 2020 Master Plan

Computer Water Model being constructed by consultant. Staff is coordinating with consultant regarding areas of concern in the water model to improve accuracy. Revised schedule is to complete Master Plan by Spring.

Original Budget	$240,000
Original Contracts	$204,085
Authorized Change Orders	NA
Current Contracts	$204,085

2007 Well 19

Staff is working on a Request for Proposals to construct a new Well 19. RFP should be released next year for consideration by the Board. Proposal to be discussed at tonight's meeting. ~~Discussion regarding this project is scheduled for February PROC.~~

2103 Booster 19 (Holly Drive) Generator

Purchase Order has been submitted. Generator has been installed.

At the request of property owner Staff is working to hire a landscape architect with the intent to install screening landscaping. Staff has hired Soltis Landscaping to develop a screening plan. Staff and consultant met with homeowner last week to discuss proposed plan. Landscaping proposal to be discussed at tonight's meeting.

Original Budget.....$75,000
Original Contracts.....$61,366
Authorized Change Orders ..... NA
Current Contracts $61,366

~~2107 Risk and Resiliency Assessment of SCADA system~~

~~Company has contracted a detailed study to find and eliminate openings in our SCADA system to reduce risk of outside attacks. Draft final report has been submitted and is currently being reviewed by staff. Staff is addressing several minor deficiencies that were identified in the report. Majority of deficiencies are related to wires not being installed in conduit.~~

~~Original Budget.....$15,000~~
~~Original Contracts.....$12,000~~
~~Authorized Change Orders ..... NA~~
~~Current Contracts ..... $12,000~~

2112 Treatment Plant

Technical memorandum discussing the pros and cons of a company treatment plant. Contract with TKE fully executed. Scheduling pre-design meeting. Pre-design meeting held and data review is ongoing. Consultant conducted a site visit in late February.

Original Budget.....$27,000
Original Contracts.....$24,500
Authorized Change Orders ..... NA
Current Contracts $24,500

Agenda Date: March 15, 2022

Agenda Item No. 6A

Item Title: Paloma Curve Hydraulic Break

Purpose:
To discuss a proposal from WSC for modernizing the Paloma Curve Hydraulic Break.

Issues:
Should the Board Authorize execution of a Predesign Contract?

Manager's Recommendation:
Authorize General Manager to execute contract with WSC for a not to exceed $40,000 time and material contract.

Background:
The Paloma Curve Hydraulic Break consists of a hydrogenator plant owned by the City of Upland and a concrete Hydraulic Break owned by the Company. The facility is designed to convert hydraulic energy into electrical energy and remove any remaining hydraulic energy prior to discharge at the Company's Reservoir Number Four.

During periods of high-water flow (sustained average-or-higher rainfall events) the amount of water flowing through the facility can create significant low frequency vibrations. These events occur only periodically (once every couple of years). The current property owner has requested that the Company eliminate the noise and/or abandon the facility.

Last year staff started reviewing the Paloma Hydraulic Break, including discussions with the current homeowner. The following solutions are currently being considered:

- Replace metal roof with concrete and install low frequency dampening devices within chamber. Unfortunately, low frequency noise is the hardest to dampen and significant (expensive) sound proofing would not be completely effective.
- Replace hydraulic break with a connector pipeline on current site. Probably the least expensive option but requires maintaining facilities on private property w/ easement.
- Replace entire facility with a pipeline within Paloma Drive. Probably the most expensive option but removes all Company facilities from private property. Would need to coordinate with City to see if they would be willing to abandon their building.

The concrete roof solution requires structural and sound engineering. The two solutions that involve eliminating the Paloma hydraulic break need detailed engineering analysis to ensure continued functioning of the pipeline and reservoir.

Staff requested a proposal from WSC Engineering, who is currently working on the Company's hydraulic model for our Master Plan Update. Staff is proposing to hire WSC using funds remaining on the 2020 UWMP and 2021 AWIA contracts (about $23k remaining between both budgets). The remainder would come from Capital Reserves.

Agenda Date: March 15, 2022

The PROC considered this item at their regularly February 2022 meeting and recommended approval by the Board.

Previous Action:
None

Impact on Budget:
$40,000 study
Full project cost is being developed

January 13, 2022
Brian Lee
San Antonio Water Company
139 N. Euclid Ave.
Upland, CA 91786

SUBJECT: PALOMA CURVE HYDRAULIC BREAK

Dear Mr. Lee,

Water Systems Consulting, Inc. (WSC) is pleased to present this proposal to evaluate the existing Paloma Curve Hydraulic Break and identify solutions for the deep vibrations and sound generated, while optimizing system efficiency when possible. We are excited for the opportunity to work alongside the San Antonio Water Company (SAWCo) as you continue to deliver long-term solutions, value, and leadership to the community that you serve. Our hope is that our proposal demonstrates the commitment to quality that we will bring to your team.

Through close coordination with SAWCo, WSC will evaluate alternatives to reduce deep vibrations and sound generated at the Paloma Curve Hydraulic Break facility, develop planning level cost estimates, and document the existing conditions and analyses performed in this project. WSC will use a proven quality assurance/quality control (QA/QC) program to make sure deliverables meet our high standards and your expectations.

We hope this proposal demonstrates our interest and commitment to SAWCo. If you have any questions on any aspect of this proposal, please feel free to contact WSC's proposed Project Manager and Principal in Charge, Kirsten Plonka, at (619) 961-0929, or kplonka@wsc-inc.com. Kirsten is authorized to represent WSC in negotiations, and sign contracts and agreements.

Thank you again for your consideration, and we look forward to your response.

Sincerely,

Water Systems Consulting, Inc.

Kirsten Plonka

Kirsten Plonka, PE
Project Manager/Principal in Charge

Paloma Curve Hydraulic Break

TASK 0.0 PROJECT MANAGEMENT

0.1 Project Management and Administration

- Prepare monthly invoices and monthly progress reports describing the work performed during the previous month.

0.2 Project Meetings

- Kickoff Meeting: conduct a one-hour kickoff meeting via Microsoft Teams to introduce the project team members, discuss project goals and objectives to foster project understanding, review proposed scope and schedule and its ability to meet project objectives, and review available data.
- As-needed coordination meetings to engage with SAWCo staff, update on progress, and gain input and further understanding.
- Draft TM Review Meeting: Plan, organize, and conduct a one-hour Draft TM review meeting via Microsoft Teams to discuss any comments. It is anticipated that the meeting will be held two weeks after submitting the Draft TM.

0.3 QA/QC

- Provide comprehensive quality control reviews of deliverables by WSC senior technical staff prior to submittal to SAWCo for review.

Deliverables: Monthly invoice and progress reports.

TASK 1.0 SYSTEM EVALUATION

1.1 Evaluate the existing pipeline

- Primary Focus
  - (1) Consider up to three alternatives to eliminate deep vibration and sound at Paloma Curve and E. Park Blvd during high flows.
- Secondary Focus
  - (1) Evaluate the existing pipeline that conveys irrigation water from the Forebay south to the Paloma Curve Hydraulic Break and into Reservoir 4.
    - (a) Consider additional alignments to provide SAWCo better access to infrastructure.
  - (2) Determine appropriate sizing based on evaluation criteria established in SAWCo's Comprehensive System Master Plan.
  - (3) Consider screening mechanisms at the Forebay or other areas of SAWCo's system to clear debris from distribution. Screening may be necessary if valves are added to the mainline to better assist operations.

TASK 2.0 COST ESTIMATE

2.1 Develop Cost Estimate

- Develop a preliminary cost estimate for sound reduction measures and proposed pipeline alignment and sizing, and existing pipeline abandonment. Include estimated costs for other recommended improvements (screening, reservoir inlet modifications, etc.)

Deliverables: Cost estimate for the proposed improvements.

TASK 3.0 TECHNICAL MEMORANDUM (TM)

3.1 Develop Draft TM

- Develop a draft TM documenting the following:

  (1) Introduction and Background

  (a) SAWCo's goals (i.e. reduce noise and vibration, improve access to SAWCo infrastructure, and mitigate hydraulic break issues).

  (2) Existing conditions.

  (a) Include summary of data available.

  (3) Proposed improvements and planning level costs.

  (4) Conclusions

3.2 Develop Final TM.

- Incorporate comments and feedback from SAWCo into a Final TM.

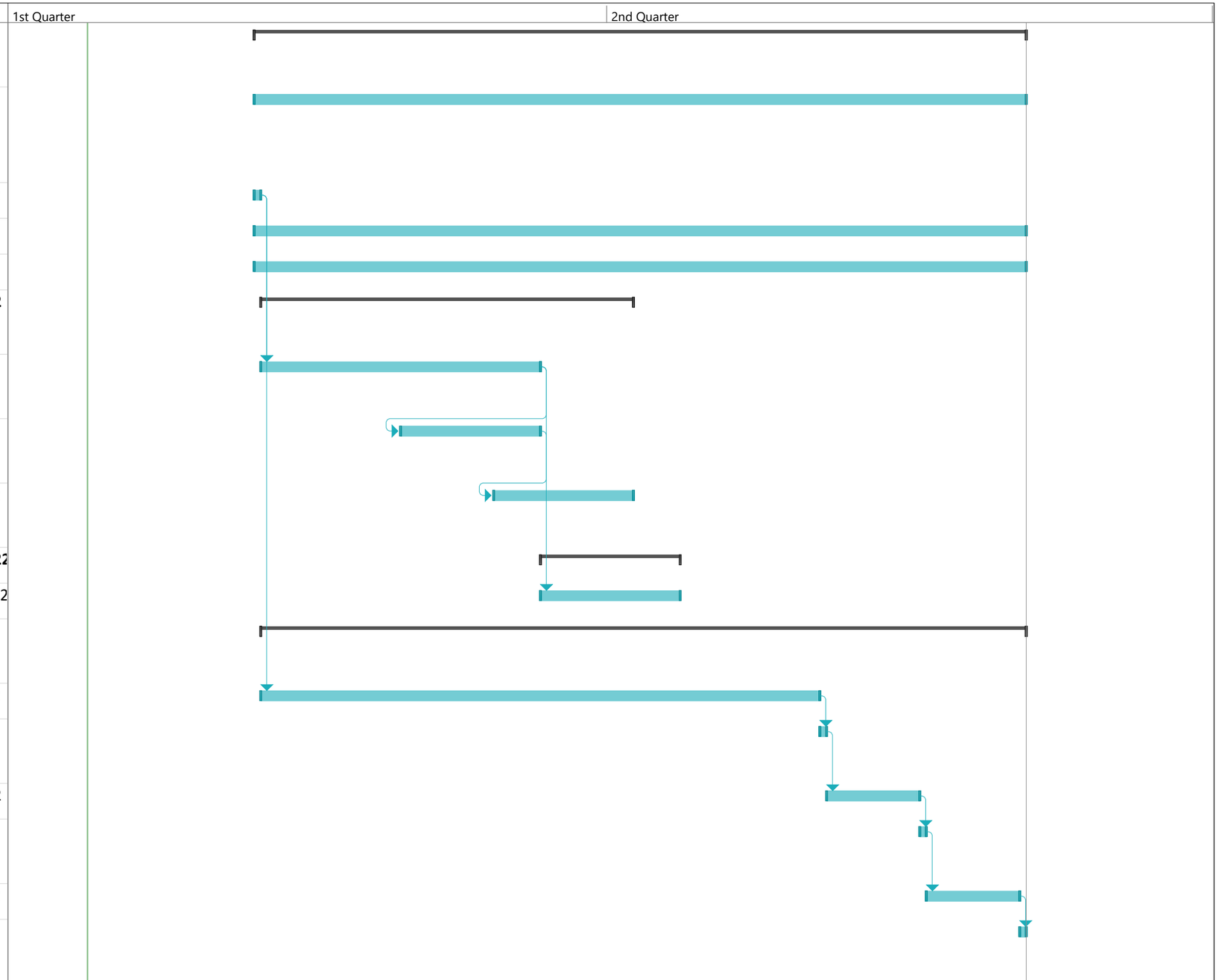
Deliverables: Draft and Final TM.

San Antonio Water Company
Paloma Curve Hydraulic Break
Cost Proposal
1/13/2022

Task No.	Task Description	WSC									ALL FIRMS
		Project Manager	QA/QC	Project Engineer	Engineering Support	Administration	WSC Labor Hours	WSC Labor Fee	Expenses	WSC Fee	Total Fee
		Kirsten Plonka	Jeroen Olthof	Heather Freed	Patricia Olivas	Kay Merrill					
	Billing rates, $/hr	*$280*	*$320*	*$185*	*$155*	*$160*					
0	**Project Management**										
0.1	Project Management and	6				7	**13**	**$ 2,800**	**$ -**	**$ 2,800**	**$ 2,800**
0.2	Project Kickoff	1		1	2		**4**	**$ 775**	**$ -**	**$ 775**	**$ 775**
0.3	Internal Coordination Meetings	6		6	6		**18**	**$ 3,720**	**$ -**	**$ 3,720**	**$ 3,720**
0.4	Client Coordination Meetings	6		6	6		**18**	**$ 3,720**	**$ -**	**$ 3,720**	**$ 3,720**
0.5	QA/QC		8				**8**	**$ 2,560**	**$ -**	**$ 2,560**	**$ 2,560**
	SUBTOTAL	**19**	**8**	**13**	**14**	**7**	**61**	**$ 13,575**	**$ -**	**$ 13,575**	**$ 13,575**
1	**System Evaluation**										
1.1	Hydraulic Noise Evaluation	3		20	20		**43**	**$ 7,640**	**$ -**	**$ 7,640**	**$ 7,640**
1.2	Evaluate Existing Mainline	3		4	8		**15**	**$ 2,820**	**$ -**	**$ 2,820**	**$ 2,820**
1.3	Consider System Efficiency	3		16	16		**35**	**$ 6,280**	**$ -**	**$ 6,280**	**$ 6,280**
	SUBTOTAL	**9**	**0**	**40**	**44**	**0**	**93**	**$ 16,740**	**$ -**	**$ 16,740**	**$ 16,740**
2	**Cost Estimate**										
2.1	Cost Estimate	1		2	16		**19**	**$ 3,130**	**$ -**	**$ 3,130**	**$ 3,130**
	SUBTOTAL	**1**	**0**	**2**	**16**	**0**	**19**	**$ 3,130**	**$ -**	**$ 3,130**	**$ 3,130**
3	**Technical Memorandum**										
3.1	Draft TM	4		4	8		**16**	**$ 3,100**	**$ -**	**$ 3,100**	**$ 3,100**
3.2	Draft TM Review Meeting	1		1	1		**3**	**$ 620**	**$ -**	**$ 620**	**$ 620**
3.3	Final TM	2		4	8		**14**	**$ 2,540**	**$ -**	**$ 2,540**	**$ 2,540**
	SUBTOTAL	**7**	**0**	**9**	**17**	**0**	**33**	**$ 6,260**	**$ -**	**$ 6,260**	**$ 6,260**
	COLUMN TOTALS	**36**	**8**	**64**	**91**	**7**	**206**	**$ 39,705**	**$ -**	**$ 39,705**	**$ 39,705**

10% mark-up on direct expenses; 15% mark-up for sub-contracted services
Standard mileage rate $0.57 per mile (or current Federal Mileage Reimbursement Rate)
Rates are subject to revision as of January 1 each year.

ID	Task	Task Name	Duration	Start	Finish
1		**Task 0. Project Management**	**84 days**	**Mon 2/7/22**	**Thu 6/2/22**
2		Project Management and Administration	84 days	Mon 2/7/22	Thu 6/2/22
3		Project Kickoff	1 day	Mon 2/7/22	Mon 2/7/22
4		Project Meetings	84 days	Mon 2/7/22	Thu 6/2/22
5		QA/QC	84 days	Mon 2/7/22	Thu 6/2/22
6		**Task 1. System Evaluation**	**40 days**	**Tue 2/8/22**	**Mon 4/4/22**
7		Hydraulic Noise Evaluation	30 days	Tue 2/8/22	Mon 3/21/22
8		Evaluate Existing Mainline	15 days	Tue 3/1/22	Mon 3/21/22
9		Consider System Efficiency	15 days	Tue 3/15/22	Mon 4/4/22
10		**Task 2. Cost Estimate**	**15 days**	**Tue 3/22/22**	**Mon 4/11/22**
11		Cost Estimate	15 days	Tue 3/22/22	Mon 4/11/22
12		**Task 3. Technical Memorandum**	**83 days**	**Tue 2/8/22**	**Thu 6/2/22**
13		Draft TM	60 days	Tue 2/8/22	Mon 5/2/22
14		Draft TM Submission	1 day	Tue 5/3/22	Tue 5/3/22
15		Draft TM Review	10 days	Wed 5/4/22	Tue 5/17/22
16		Draft TM Review Meeting	1 day	Wed 5/18/22	Wed 5/18/22
17		Final TM	10 days	Thu 5/19/22	Wed 6/1/22
18		Final TM Submission	1 day	Thu 6/2/22	Thu 6/2/22



Project: SAWCo_Hydraulic Brea
Date: Thu 1/13/22

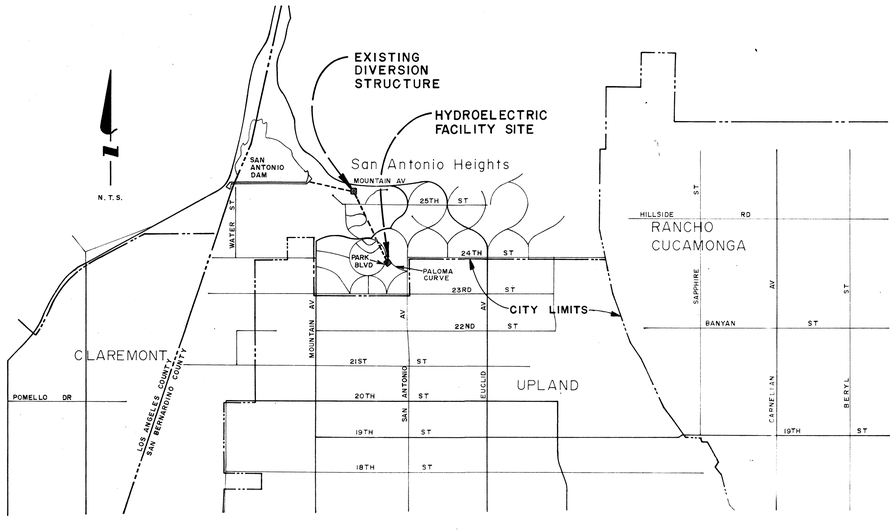
Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Progress
Manual Progress

CITY OF UPLAND
WATER DEPARTMENT

CONTRACT DRAWINGS

FOR

CONSTRUCTION OF HYDROGENERATOR No.1

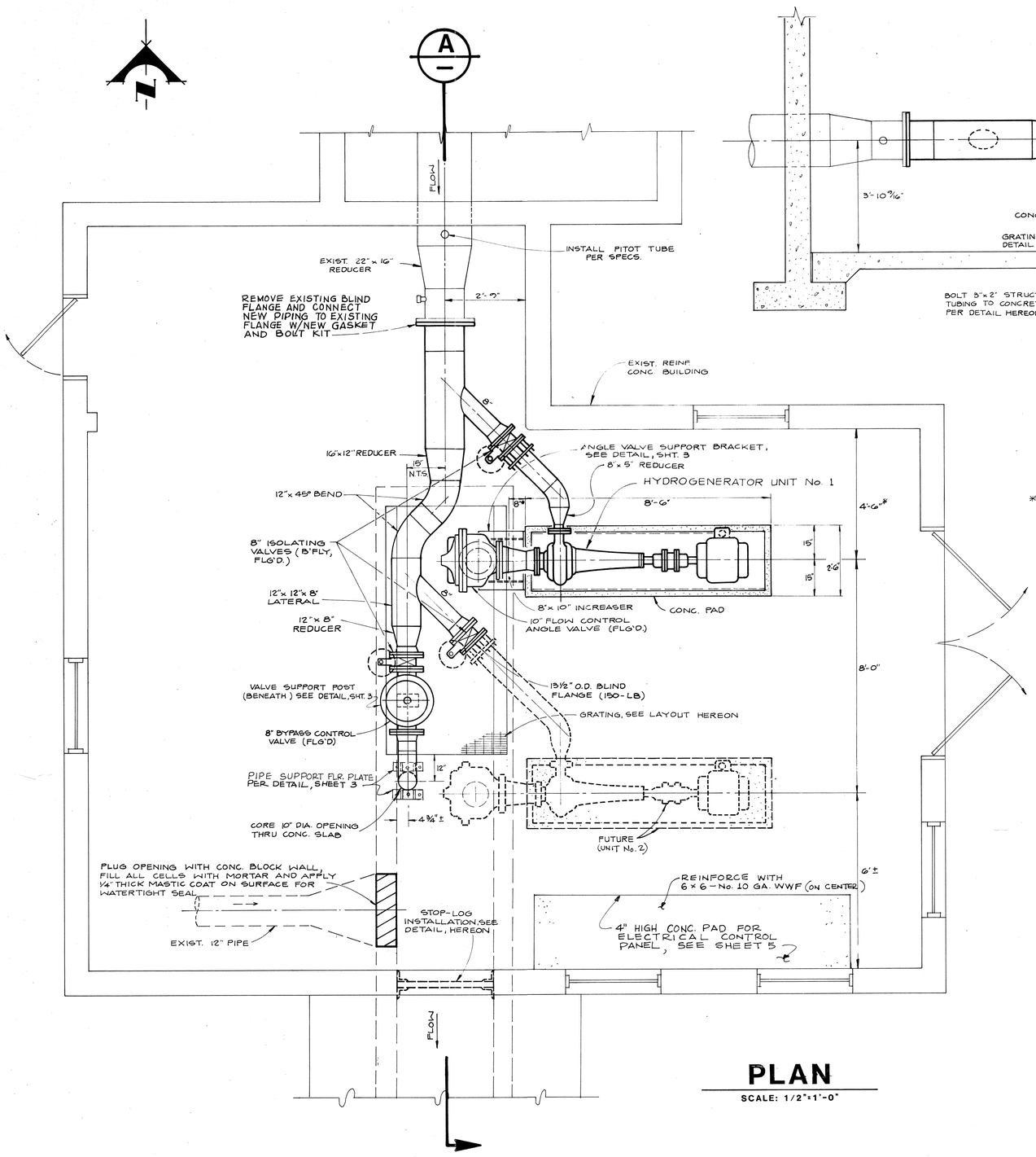


VICINITY MAP

PREPARED BY

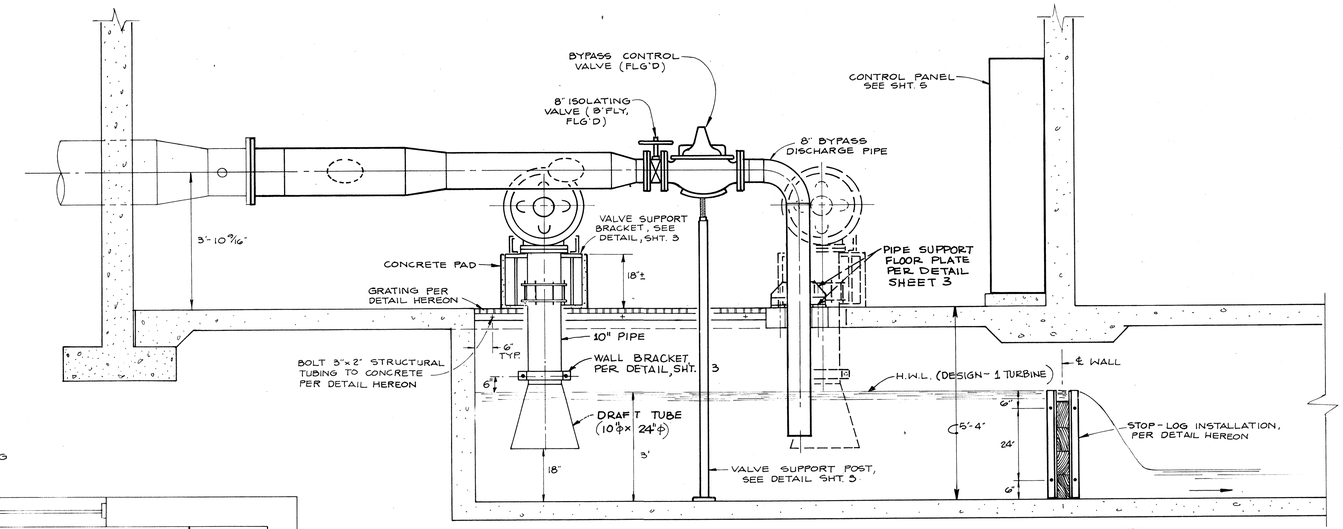
JOHN EGAN and ASSOCIATES, INC.
CONSULTING ENGINEERS

1983



PLAN

SCALE: 1/2"=1'-0"



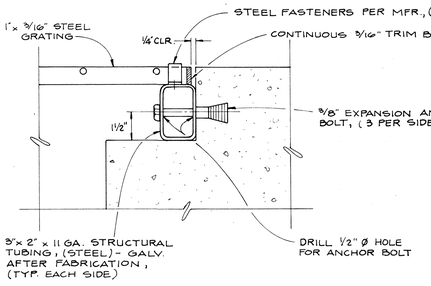
NOTE:
FIELD DETERMINE HEIGHT AND NUMBER OF STOP-LOGS REQUIRED

SECTION

SCALE : 1/2"=1'-0"

A

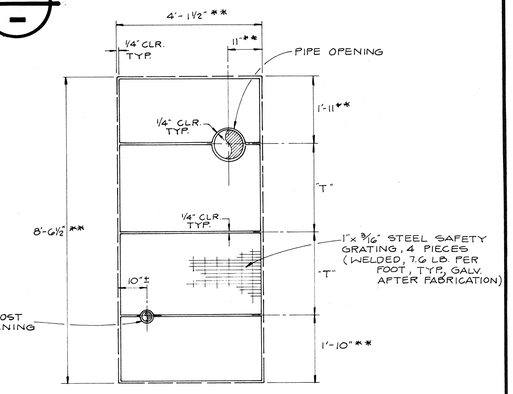
* FIELD DETERMINE THESE DIMENSIONS



SECTION

TYPICAL GRATING SUPPORT DETAIL

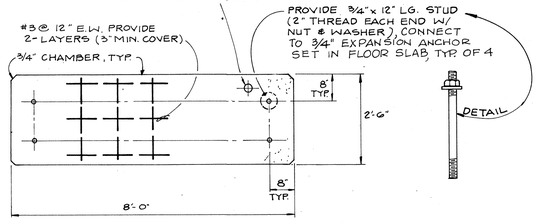
SCALE 1½" = 1'-0"



** FIELD VERIFY PRIOR TO FABRICATION

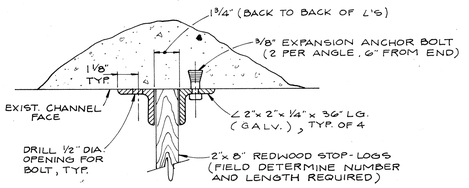
GRATING LAYOUT PLAN

SCALE ½" = 1'-0"



CONCRETE PAD DETAIL

(FOR HYDROGENERATOR)
SCALE ½" = 1'-0"



TYPICAL STOP - LOG DETAIL

SCALE 3" = 1'-0"

REV	DATE	BY	DESCRIPTION

SCALE: AS SHOWN

DRAWN D.K. & E.F.
DESIGNED A.B.I.
CHECKED J.E.

SUBMITTED John D Egan JOHN EGAN R.C.E. No. 14853 8-3-83 DATE

RECOMMENDED R.C.E. No. DATE

JOHN EGAN and ASSOCIATES INC.
CONSULTING ENGINEERS
366 ORANGE SHOW LANE, SAN BERNARDINO, CA. 92408
(714)889-0676 (714)825-1550

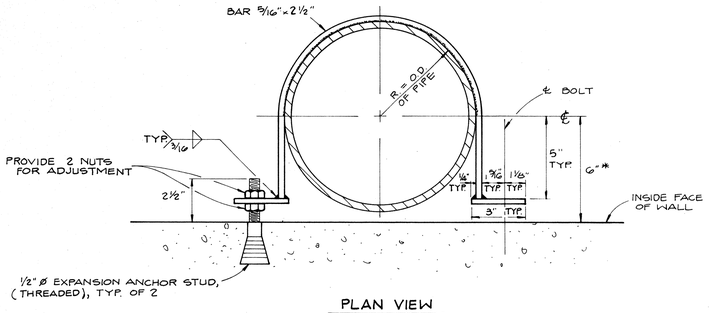
APPROVED CITY OF UPLAND, WATER DEPT. DIRECTOR 8/9/83 DATE

APPROVED DATE

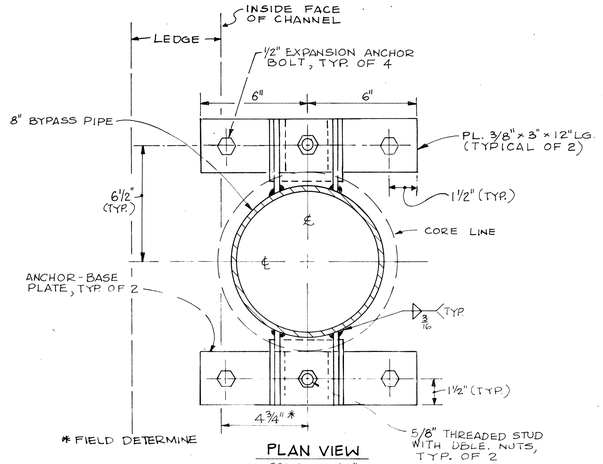
CITY OF UPLAND WATER DEPARTMENT

HYDROGENERATOR UNIT NO. 1 INSTALLATION DETAILS

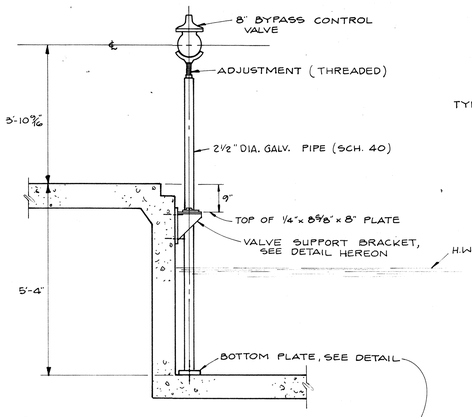
F6-659
SHEET 2 OF 5 SHEETS



PLAN VIEW
SCALE 3"=1'-0"



PLAN VIEW
SCALE 3"=1'-0"



SIDE ELEVATION
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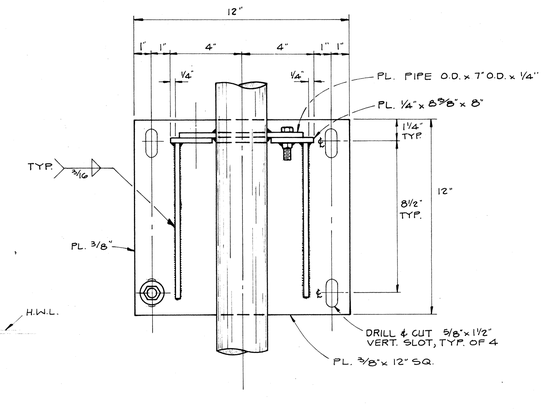

FRONT VIEW
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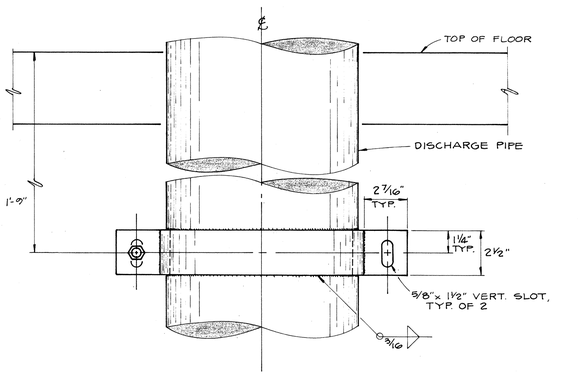
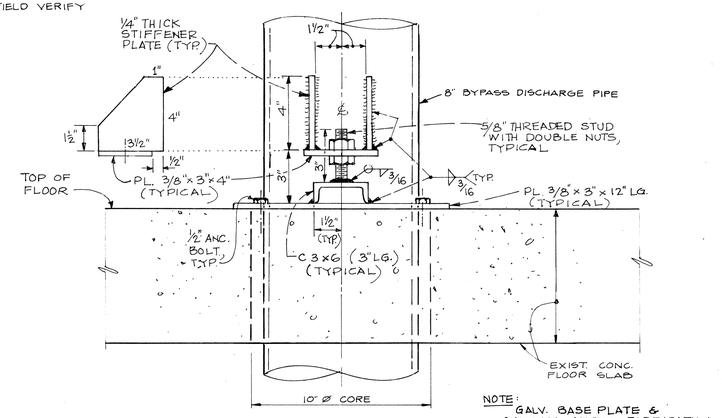


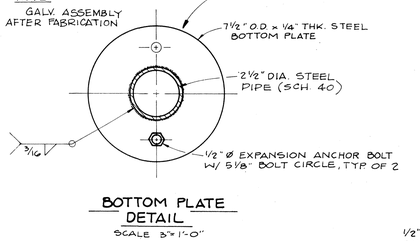
FRONT VIEW
SCALE 3"=1'-0"



ELEVATION
SCALE 3"=1'-0"

NOTE:
GALV. BASE PLATE & CHANNEL AFTER FABRICATION, TYPICAL

NOTE:
GALV. ASSEMBLY AFTER FABRICATION



BOTTOM PLATE DETAIL
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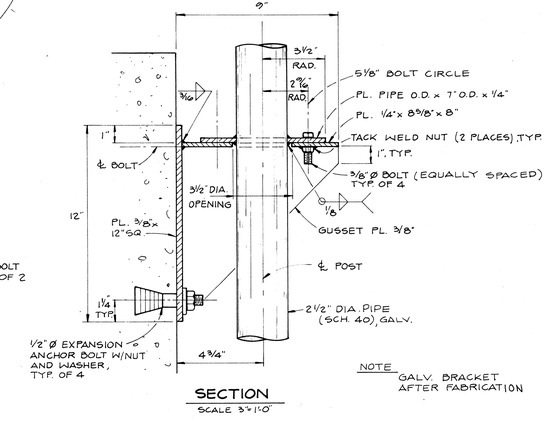
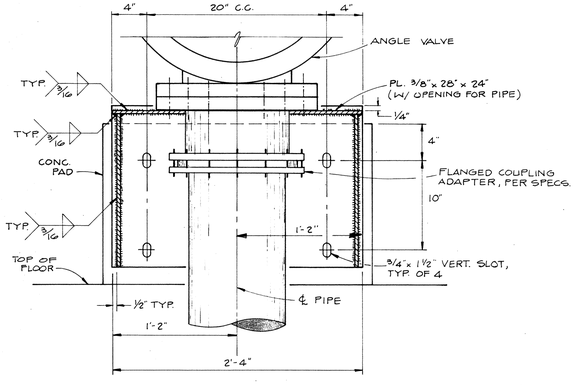


SECTION
SCALE 3"=1'-0"

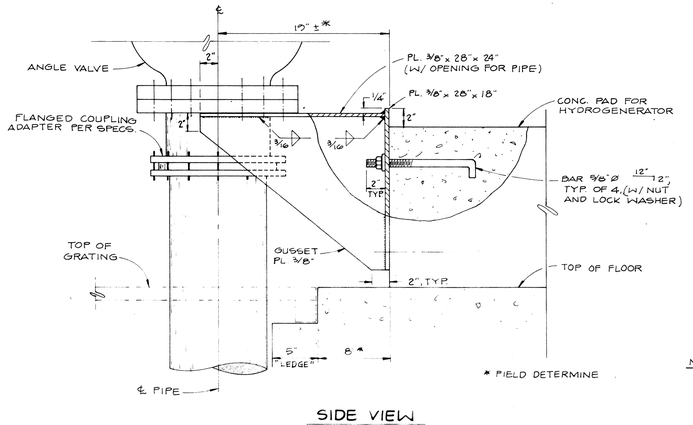
NOTE
GALV. BRACKET AFTER FABRICATION

PIPE SUPPORT - WALL BRACKET DETAILS



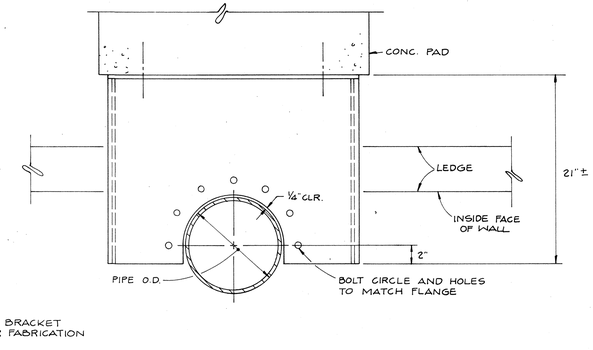
FRONT VIEW
SCALE 1 1/2"=1'-0"

PIPE SUPPORT - FLOOR PLATE DETAILS



SIDE VIEW
SCALE 1 1/2"=1'-0"

VALVE SUPPORT POST DETAILS



NOTE
GALV. BRACKET AFTER FABRICATION

PLAN VIEW
SCALE 1 1/2"=1'-0"

VALVE SUPPORT BRACKET DETAILS

REV	DATE	BY	DESCRIPTION

SCALE: AS SHOWN

DRAWN: E.F.
DESIGNED: A.B.I.
CHECKED: J.E.

SUBMITTED: John G. Egan — JOHN EGAN, R.C.E. No. 14853 — 8-3-83 DATE

RECOMMENDED: R.C.E. No. — DATE

JOHN EGAN and ASSOCIATES INC.
CONSULTING ENGINEERS
[illegible] ORANGE SHOW LANE, SAN BERNARDINO, CA. 92408
(714)889-0676 (714)825-1550

APPROVED: CITY OF UPLAND, WATER DEPT. DIRECTOR — 8/9/83 DATE

APPROVED: DATE

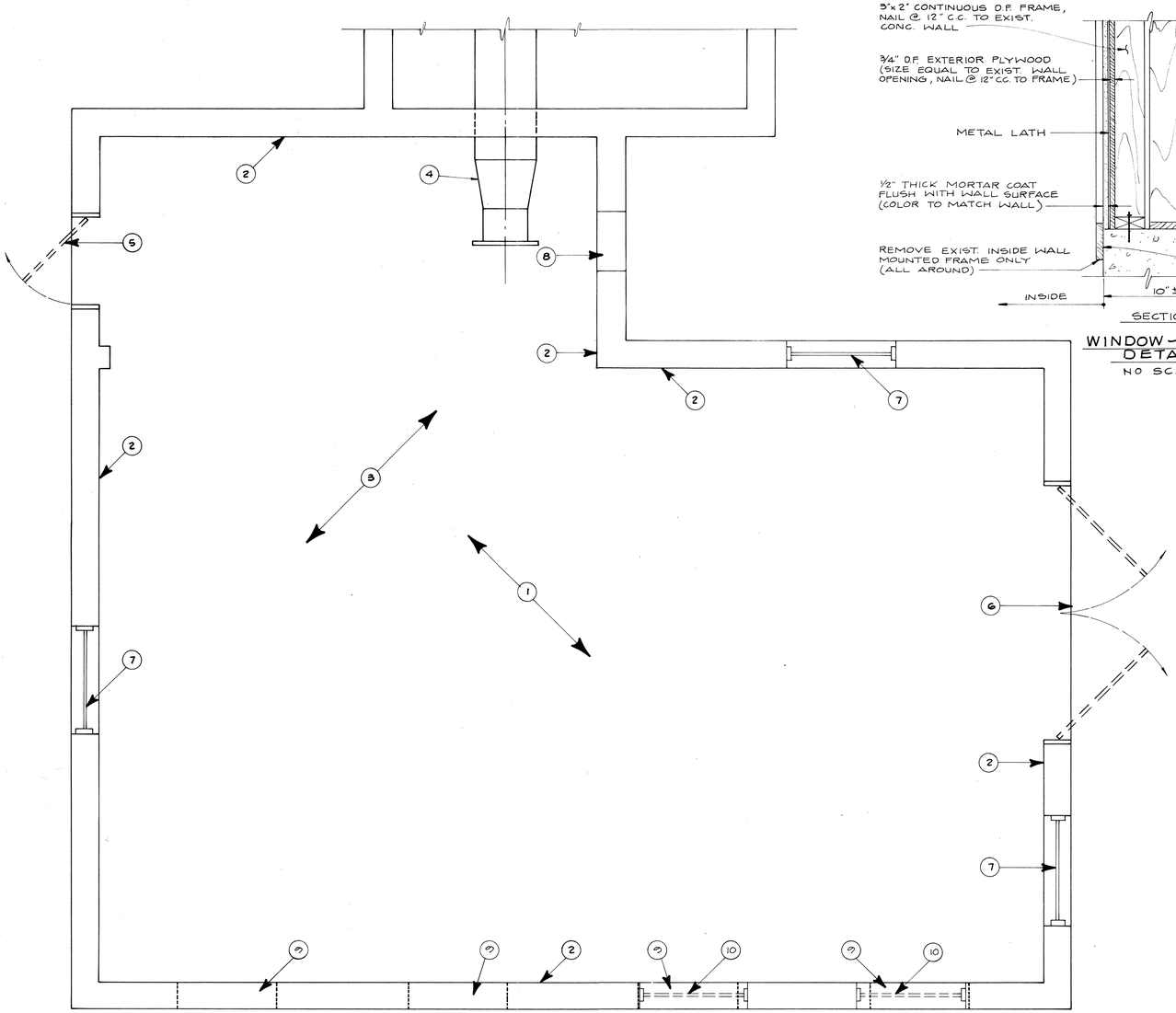
CITY OF UPLAND
WATER DEPARTMENT

HYDROGENERATOR UNIT NO. 1
METALWORK DETAILS

F6-659
SHEET 3 OF 5 SHEETS

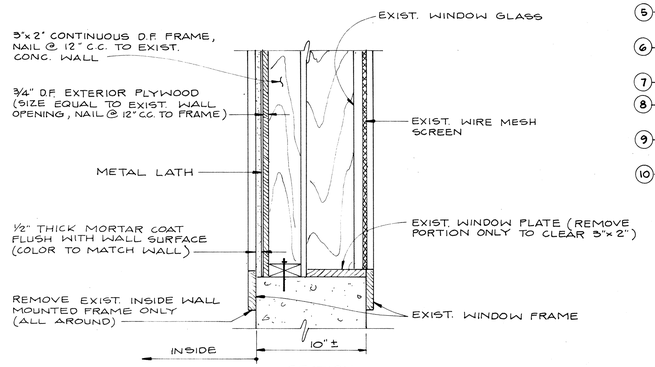
CONSTRUCTION NOTES

1. CLEAN, DEGREASE AND SEAL CONCRETE FLOOR
2. CLEAN, PATCH AND PAINT WALLS
3. CLEAN, PATCH AND PAINT CEILING
4. CLEAN AND PAINT PIPE
5. REMOVE OLD DOOR AND INSTALL NEW STEEL DOOR AND FRAME (TRIM CONCRETE AS REQUIRED FOR STANDARD DOOR INSTALLATION).
6. REMOVE OLD DOOR AND INSTALL NEW DOUBLE LEAF STEEL DOOR AND FRAME (TRIM CONCRETE AS REQUIRED FOR STANDARD DOOR INSTALLATION).
7. CLEAN, REPAIR AND PAINT EXISTING WINDOWS.
8. CLEAN OUT EXISTING OPENING AND INSTALL LOUVER SCREENED VENT PER TYPICAL DETAIL.
9. REPLACE EXISTING VENTS WITH NEW SCREENED LOUVER VENTS PER TYPICAL DETAIL.
10. BOARD-UP AND MORTAR COAT (FLUSH WITH WALL FACE) EXISTING INTERIOR FACE OF WINDOW OPENING PER DETAIL HEREON



EXISTING CONCRETE BUILDING - RENOVATION PLAN

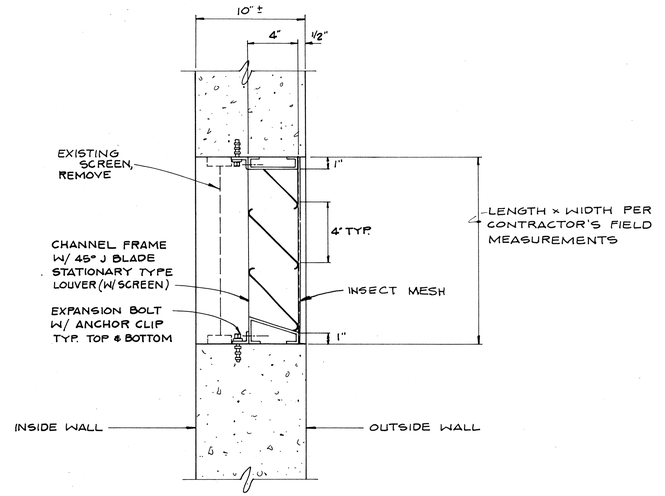
SCALE 1/2" = 1'-0"



SECTION

WINDOW-CLOSURE DETAIL

NO SCALE



TYPICAL VENT INSTALLATION DETAIL

NO SCALE

REV	DATE	BY	DESCRIPTION

SCALE: AS SHOWN

DRAWN: E.F.

DESIGNED: L.L., A.B.I.

CHECKED: J.E.

SUBMITTED: John D Egan (JOHN EGAN) R.C.E. No. 14853 DATE 8-3-83

RECOMMENDED: R.C.E. No. DATE

JOHN EGAN and ASSOCIATES INC.
CONSULTING ENGINEERS
366 ORANGE SHOW LANE, SAN BERNARDINO, CA. 92408
(714)889-0676 (714)825-1550

APPROVED: CITY OF UPLAND, WATER DEPT. DIRECTOR DATE 8/9/83

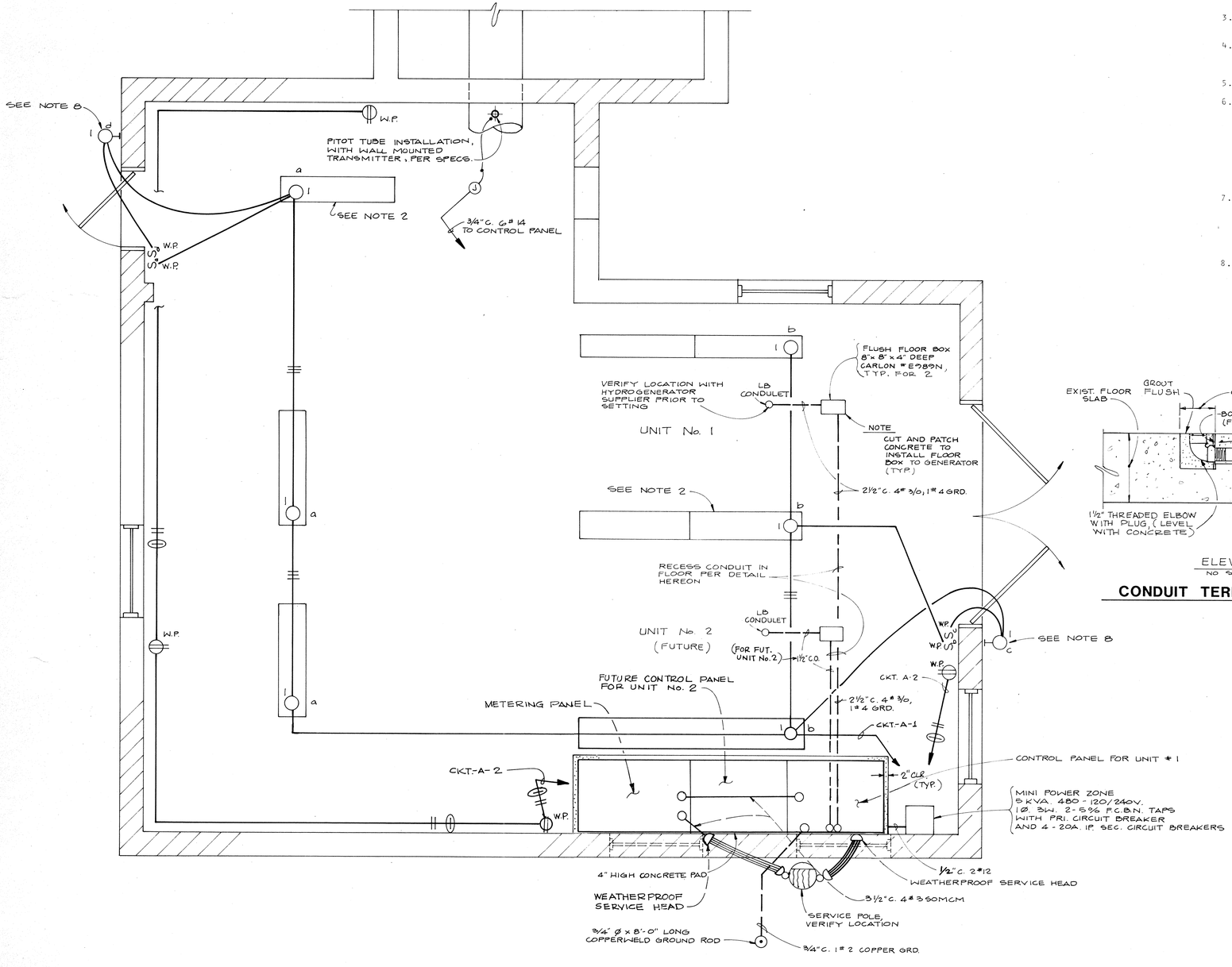
APPROVED: DATE

CITY OF UPLAND
WATER DEPARTMENT

HYDROGENERATOR UNIT NO. 1
BUILDING RENOVATIONS

F6-659

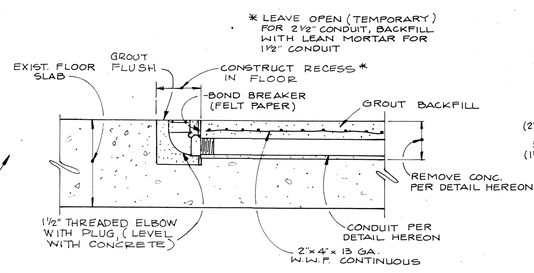
SHEET 4 OF 5 SHEETS



ELECTRICAL PLAN
NO SCALE

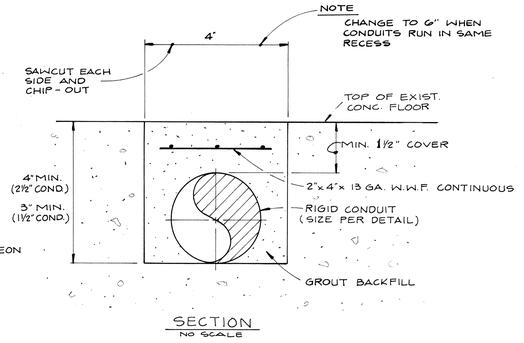
NOTES

1. ALL EXPOSED CONDUITS TO LIGHTS, RECEPS & PITOT TUBE ETC., SHALL BE RUN PARALLEL OR 90° TO WALLS & CEILINGS.
2. FLUORESCENT FIXTURES SHALL BE CHAIN HUNG FROM CEILINGS, SUITABLE FOR WET LOCATIONS, CLEAR ACRYLIC LENS, GASKETED. KEENE #SWC 240, 2 LAMP, FOUR FOOT OR KEENE #SWC 242, 4 LAMP, 2-FOUR FOOT UNITS IN TANDEM COMPLETE WITH RAPID START 40 WATT LAMPS. TYP. FOR 3-SINGLES AND 3-TANDEMS.
3. ALL CONDUCTORS SHALL BE COPPER, WITH TYPE THW OR THWN 600 VOLT, 75°C INSULATION.
4. RECEPTACLES SHALL BE 20A. 2P. 3W GROUNDING TYPE, IN W.P. ENCLOSURE, HUBBELL #52CM62, IN #60CM83 BOX, AND #52CM22 WEATHERPROOF COVER. MOUNT AT +48".
5. SWITCHES SHALL BE 20A. 120/277V.AC. WITH HYPALON PLATE HUBBELL #17CM81.
6. ALL ITEMS RELATED TO THE ELECTRICAL POWER SERVICE SUCH AS SERVICE CONDUIT, CONDUCTORS, DUCTS, SERVICE HEADS, RISERS, PULL BOXES AND PROTECTIVE COVERING FROM SERVICE POLE LOCATION SHALL BE PROVIDED AND/OR INSTALLED AND SHALL BE VERIFIED WITH SERVING UTILITY PRIOR TO SUBMISSION FOR THE BID. THE ACT OF SUBMITTING THE BID SHALL CONSTITUTE THE FULL RESPONSIBILITY OF THE CONTRACTOR TO INSTALL SERVICE IN COMPLIANCE WITH THE SERVING UTILITY AND ELECTRICAL ENGINEER AND TO PAY ALL CHARGES LEVIED BY THE SERVING UTILITY FOR THIS SERVICE, EXCEPTING FIRST BILLING PERIOD DEPOSIT.
7. IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO DO ALL CORING, CUTTING, PATCHING AND REFINISHING OF EXISTING FLOOR AND SURFACES WHEREVER IT IS NECESSARY FOR HIM TO PENETRATE FOR HIS WORK. ALL OPENINGS MADE SHALL BE SEALED TO MEET THE FIRE RATING OF THIS PARTICULAR WALL, FLOOR OR CEILING. COORDINATION WITH ENGINEER FOR APPROVAL IS NECESSARY PRIOR TO CUTTING INTO THE STRUCTURE.
8. INCANDESCENT BRACKET FIXTURE WITH 150W. LAMP HOLOPHANE #400, COMPLETE WITH SHOCK RESISTANT GLASS REFRACTOR AND CAST ALUMINUM GRID GUARD, TYP. FOR 2.



ELEVATION
NO SCALE

CONDUIT TERMINAL DETAIL



SECTION
NO SCALE

RECESSED CONDUIT DETAIL

ELECTRICAL SYMBOL LIST

SYMBOL	DESCRIPTION
———	CONDUIT RUN, EXPOSED ON CEILING, WALLS OR UNDER FLOOR.
— — —	CONDUIT RUN, UNDERGROUND.
10	CROSS LINES ON CONDUIT RUNS INDICATE NUMBER OF #12AWG, 600V, CONTAINED THEREIN. TWO #12 ARE INDICATED WHEN CROSS LINES ARE NOT SHOWN, NUMERAL SHOWN AT CROSS LINES INDICATES SIZE OF CONDUCTOR IN LIEU OF #12, CODE SIZE CONDUIT, CROSS LINE IN ELLIPSE IS GROUND #12AWG UNLESS NOTED OTHERWISE.
A-1,3	CONDUIT HOMERUN TO PANEL BOARD, LETTER AND NUMERALS INDICATE PANEL AND CIRCUIT NUMBER.
S_a^{K3}	SINGLE POLE SWITCH, LOWER CASE LETTER AT BOTTOM INDICATES OUTLETS CONTROLLED, LETTER AT TOP INDICATES TYPE, K=KEY CONTROLLED, P=PILOT LIGHT, 3=THREE WAY, 4=FOUR WAY.
3 ○ b	FLUORESCENT LIGHT FIXTURE OUTLET, NUMERAL INDICATES CIRCUIT NUMBER, LOWER CASE LETTER INDICATES CONTROLLING SWITCH.
$○_c^2$	BRACKET INCANDESCENT LIGHT FIXTURE OUTLET, NUMERAL INDICATES CIRCUIT NUMBER, LOWER CASE LETTER INDICATES CONTROLLING SWITCH.
⊖	DUPLEX GROUNDING TYPE RECEPTACLE.

REV	DATE	BY	DESCRIPTION

SCALE: AS SHOWN
DRAWN: E.F
DESIGNED: W.D
CHECKED: J.E.

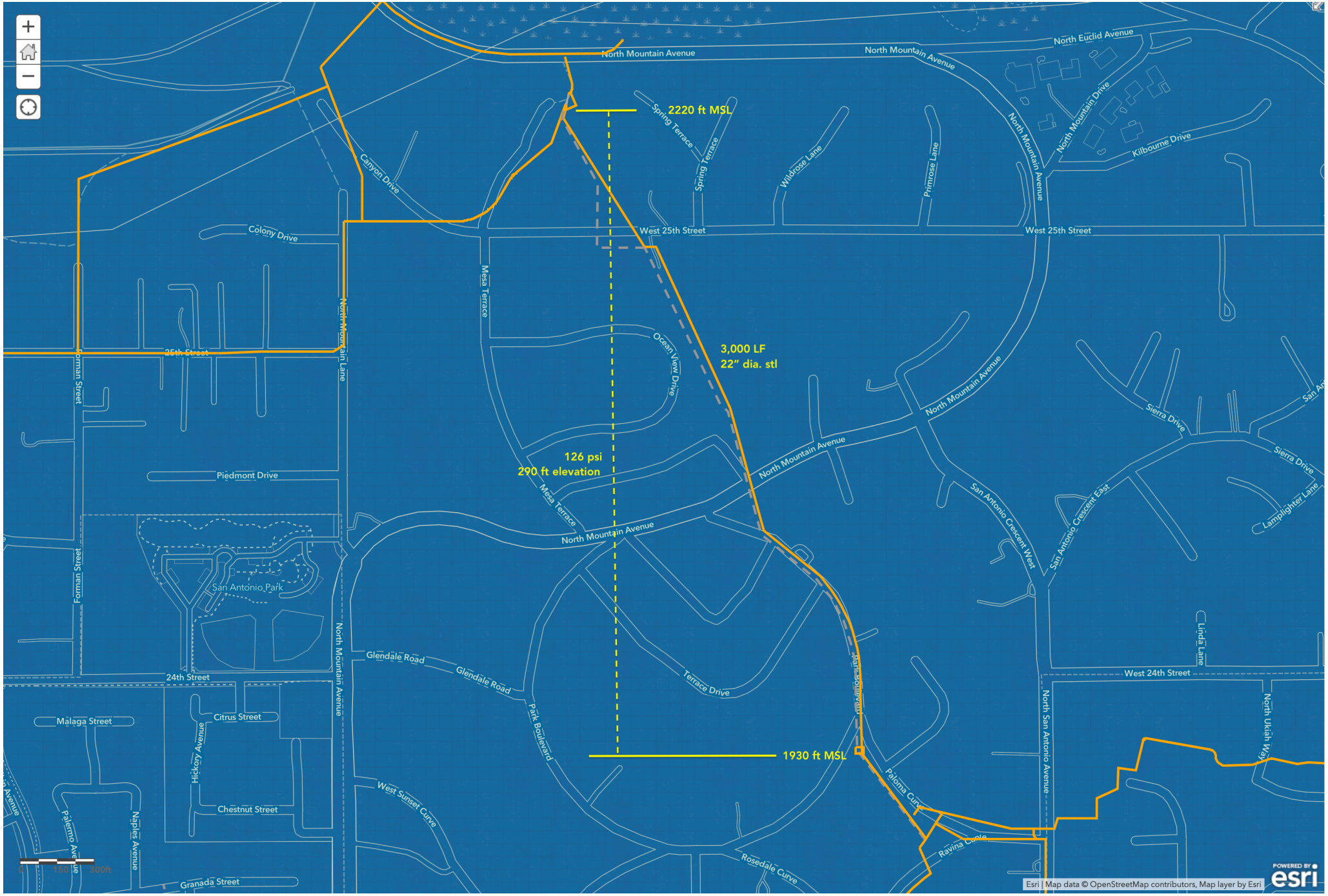
SUBMITTED: W.A. DOBY, E.E. No. 5698, DATE 8-3-83
RECOMMENDED: JOHN EGAN, R.C.E. No. 14853, DATE 8-3-83

JOHN EGAN and ASSOCIATES INC.
CONSULTING ENGINEERS
366 ORANGE SHOW LANE, SAN BERNARDINO, CA. 92408
(714)889-0676 (714)825-1550

APPROVED: CITY OF UPLAND, WATER DEPT DIRECTOR, DATE 8/9/83
APPROVED: DATE

CITY OF UPLAND
WATER DEPARTMENT
HYDROGENERATOR UNIT NO. 1
ELECTRICAL PLAN

F6-659
SHEET 5 OF 5 SHEETS


2220 ft MSL
3,000 LF
22" dia. stl
126 psi
290 ft elevation
1930 ft MSL
North Mountain Avenue
North Euclid Avenue
Spring Terrace
Canyon Drive
Wildrose Lane
Primrose Lane
North Mountain Drive
Kilbourne Drive
Colony Drive
West 25th Street
Mesa Terrace
Ocean View Drive
25th Street
Forman Street
Piedmont Drive
San Antonio Park
24th Street
Glendale Road
Park Boulevard
Terrace Drive
Sierra Drive
San Antonio Crescent East
San Antonio Crescent West
Lamplighter Lane
Linda Lane
West 24th Street
North San Antonio Avenue
North Ukiah Way
Malaga Street
Citrus Street
Hickory Avenue
Chestnut Street
Palermo Avenue
Naples Avenue
West Sunset Curve
Granada Street
Rosedale Curve
Paloma Curve
Ravina Circle
Esri | Map data © OpenStreetMap contributors, Map layer by Esri
POWERED BY esri

Input		
v	fps	11.00
L	ft	3,000
C	-	100
D	ft	1.00

7.5	mph

area	
0.79	ft2

diameter	
12	in

Head Loss		
hf	153	ft
hf	66	psi

Discharge		
h	137	ft
h	60	psi

Discharge		
h	9	cfs
h	3,878	gpm
h	5.58	MGD
h	17.14	AF/D

Horse Power (wet)	
HP	135
kW	100

KASSOUNI LAW

May 3, 2019

Jeannette Vagnozzi
City Manager
City of Upland
460 N. Euclid Ave.
Upland, CA 91786-4732

Brian Lee
General Manager
San Antonio Water Company
139 North Euclid Avenue
Upland, CA 91786

Dear Ms. Vagnozzi and Mr. Lee:

This firm represents Jason Goodman, the owner of property located at 2351 Paloma Curve in the City of Upland. Mr. Goodman is also a share holder in the San Antonio Water Company. The purpose of this letter is to demand that the San Antonio Water Company and the City of Upland remove the obsolete hydroelectric plant located within an easement on Mr. Goodman's property, and all related above and below ground piping and structures. In short, the hydroelectric plant has been non-operational for years[1], and the flow of water through existing piping has created intolerable noise and vibrations which in turn have resulted in sleepless nights and emotional and physical distress. Portions of Mr. Goodman's home cannot be used because of the intolerable noise and vibrations, which is located a mere 65 feet from the site.

The intolerable noise and vibrations from the piping, often occurring 24 hours per day, subjects the San Antonio Water Company and the City of Upland to damages and injunctive relief under theories of public and private nuisance, and inverse condemnation. With respect to the latter, inverse condemnation, both SAWCO and the City are liable not only for damages but for attorney's fees as well under Code of Civil Procedure section 1036.

Recently, Mr. Goodman's property underwent a professional noise impact analysis by Steve Rogers Acoustics, LLC. Enclosed herein is a copy of that analysis. Among other things, the analysis concludes that "operation of the subject water facility exceeds the limits prescribed by the San Bernardino County Code" and is "deemed a public nuisance." Civil Code sections 3479 and 3480 proscribe conduct which interferes with the "comfortable enjoyment of life or property," and Civil Code section 731 provides for injunctive relief. Even if the nuisance is abated, Mr. Goodman is entitled to recover damages for its "past existence."

[1] We have documentation disclosing the City's successful application to the Federal Regulatory Commission for surrender of the hydroelectric facility, and its concession that it has been non-operational since 1988.

621 CAPITOL MALL, SUITE 2025
SACRAMENTO, CALIFORNIA 95814
TELEPHONE 916.930.0030
FACSIMILE 916.930.0033

With respect to inverse condemnation, case law is unambiguous: a continuing nuisance, such as that experienced by Mr. Goodman, is actionable as a taking under State and Federal Constitutional provisions. (See *Baker v. Burbank-Glendale-Pasadena Airport Authority* (1985) 39 Cal.3d 862.)

The purpose of this letter is to afford SAWCO and the City a reasonable opportunity to address matters and resolve the issue of abatement and damages without the need for initiation of formal legal proceedings. A response is requested within 15 days.

Thank you for your attention.

Sincerely,

Timothy V. Kassouni

Enclosure

Steve Rogers Acoustics

San Antonio Water Company Facility at 2351 Paloma Curve
Noise Impact Analysis

April 3, 2019

Prepared for:

Jason Goodman
2351 Paloma Curve
Upland, CA 91784

By:

Steve Rogers Acoustics, LLC

Steve Rogers
Principal

1. Executive Summary

Steve Rogers Acoustics, LLC has been retained to study the noise impact of a water facility located on part of the property at 2351 Paloma Curve, Upland, California - which is in an unincorporated area of San Bernardino County.

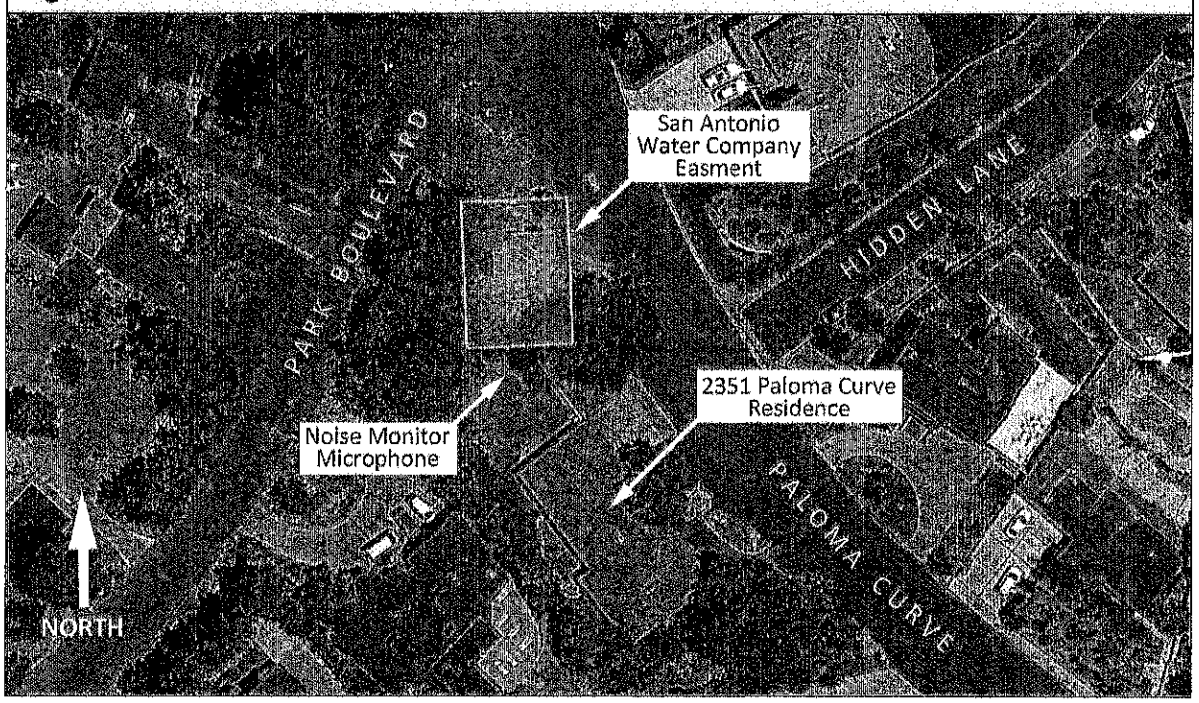
The facility is operated by the San Antonio Water Company under the terms of an exclusive easement. The remainder of the 2351 Paloma Curve property is a residential use, occupied by the property owner.

The conclusion of our noise impact analysis is that operation of the subject water facility results in a level of noise at the adjacent property that significantly exceeds the limits prescribed by the San Bernardino County Code. Operation of the water facility at 2351 Paloma Curve, Upland, California is therefore a clear violation of the County Code and deemed a public nuisance.

2. Environmental Setting

The San Antonio Water Company easement is located at the northern tip of the 2351 Paloma Curve property - as shown in Figure 1. Immediately to the south of the water facility is the side yard of the residential-use portion of the property.

Figure 1: Aerial View of Site



The studied site is in a generally very quiet suburban setting in the foothills of the San Bernardino Mountains. The 210 Freeway is 1-mile away, Mountain Avenue is 0.2-miles away and the surrounding streets are used for local access, with very light traffic. Ambient noise levels in the neighborhood are low.

3. Regulatory Setting - San Bernardino County Code

Noise control requirements for San Bernardino County are contained in Section 83.01.080 of the San Bernardino County Code of Ordinances (SBCC). Limits noise received on residential properties are summarized in Table 1.

Table 1: Summary of Exterior Noise Limits (for Residential Receivers) in the SBCC

Noise Limit Category		Daytime 7AM - 10PM	Nighttime 10PM - 7AM
A	Noise level which may not be exceeded for a cumulative period of more than **30 minutes** in any hour (L50)	55 dBA	45 dBA
B	Noise level which may not be exceeded for a cumulative period of more than **15 minutes** in any hour (L25)	60 dBA	50 dBA
C	Noise level which may not be exceeded for a cumulative period of more than **5 minutes** in any hour (L8.3)	65 dBA	55 dBA
D	Noise level which may not be exceeded for a cumulative period of more than **1 minute** in any hour (L1.7)	70 dBA	60 dBA
E	Noise level which may not be exceeded for **any period of time** (Lmax)	75 dBA	65 dBA

Source: Section 83.01.080 of the San Bernardino Code of Ordinances

An explanation of the acoustical terminology used in this report is provided in the Appendix A of this report.

4. Noise Monitoring

Noise levels were monitored at the north end of the residential portion of the 2351 Paloma Curve property (see Figure 1) for a continuous 24-hour period from March 27 - 28, 2019. The noise monitor microphone was mounted on a tripod, 5-feet above ground level, approximately 1-foot from the perimeter fence of the water facility easement. In addition to measuring and logging noise levels, the noise monitoring system was programmed to continuously record audio, to help with source identification later.

a) Instrumentation

The noise monitoring platform was a Bruel & Kjaer Type 2250 sound level meter (serial number 3008937), which meets the ANSI Standard S1.4 requirements for a Type 1 sound level meter. The measurement microphone was a Bruel & Kjaer Type 4189 (serial number 3004800). Copies of calibration certificates for the sound level meter and microphone are attached to this report as Appendix B. Calibration of the measurement system was checked immediately before the start of noise monitoring using a Bruel & Kjaer Type 4231 calibrator. The calibration was checked again on completion of the noise monitoring. There was no change in the noise level reading at 1,000 Hz between the two calibrations.

b) Results

Overall, A-weighted noise levels measured at the monitoring location are shown in the attached Graphs 1, 2 and 3.

Graphs 1 and 2 show Equivalent Noise Levels (Leq) measured over 1-minute sample periods. These graphs show some small variations in noise level from one minute to the next and also indicate sporadic, very short-duration events, such as a noisy vehicle passbys or aircraft flyovers.

Graph 3 presents the measured data as hourly "L50" noise levels. L50 is significant to this study because it is used in the San Bernardino County Code to define Noise Limit Category A, which is most applicable to steady-state noise sources such as the water facility at 2351 Paloma Curve.

Graph 3 shows that the measured L50 values are very consistent, varying by only a fraction of a decibel day and night. Minimum measured hourly L50 noise levels values are shown in Table 2.

Table 2: Minimum Measured Hourly L50 Noise Levels	
Daytime 7AM - 10PM	58.4 dBA
Nighttime 10PM - 7AM	58.5 dBA

Review of the audio recordings made by the noise monitor confirms that the dominant source of noise at the monitoring location is the adjacent water facility. Without doubt, the noise of the water facility controls L50 noise levels measured on the residential portion of the property, day and night.

c) Character of Noise Emissions from the Water Facility

Detailed analysis of the measured noise data confirms subjective impressions from our time on the 2351 Paloma Curve property, that the noise of the water facility includes strong low-frequency content - which we would characterize as "rumble".

The low-frequency sound is pervasive and apparent over much of the residential portion of the property - even inside the house, where it is very noticeable and subjectively disturbing.

Graph 4 shows the L50 frequency spectrum measured at the noise monitoring location during a typical hour (10AM has been selected for illustration). The portion of the red curve to the left of the graph represents the characteristic low-frequency rumble, which we suspect is the result of turbulent water flow through the San Antonio Water Company facility.

5. Noise Impact Evaluation

Table 2 compares minimum hourly L50 values measured adjacent to the water facility at 2351 Paloma Curve with the limits defined as "Noise Limit Category A" in the San Bernardino County Code.

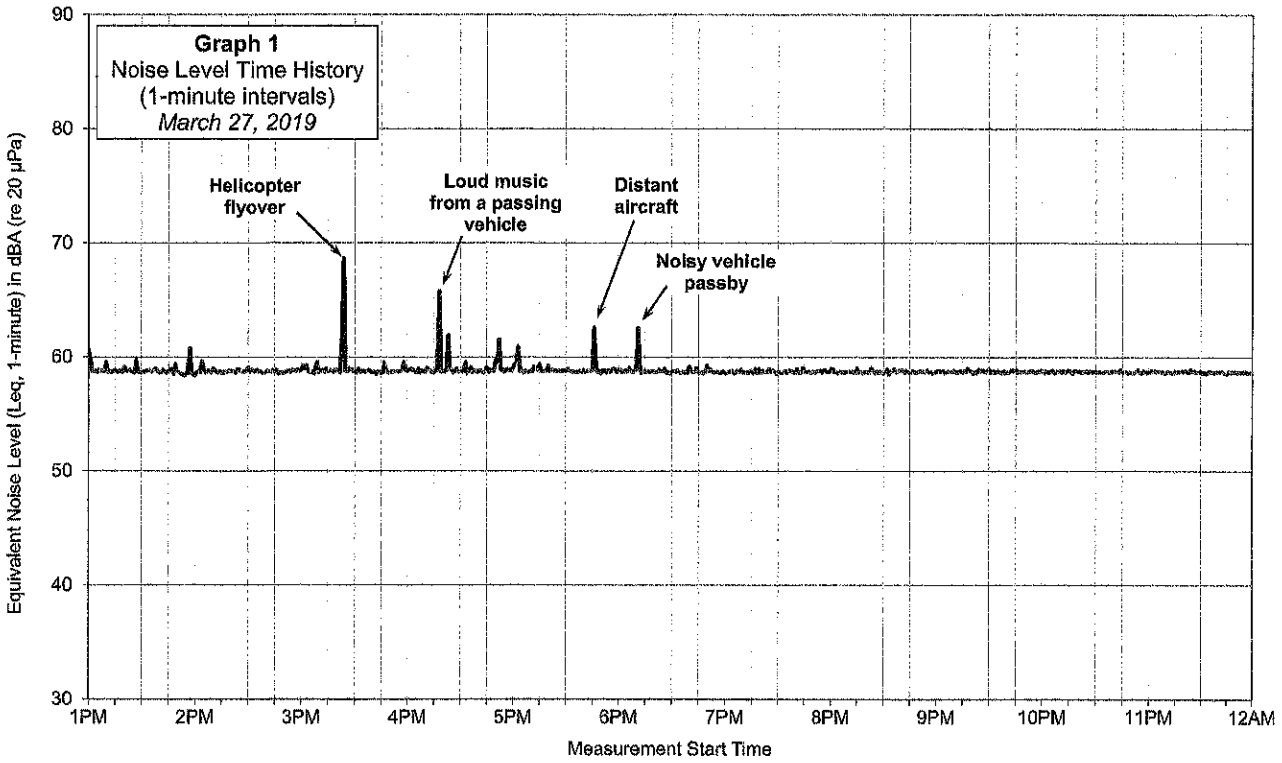
Table 2: Comparison of Water Facility Noise Levels with the Limits in the SBCC

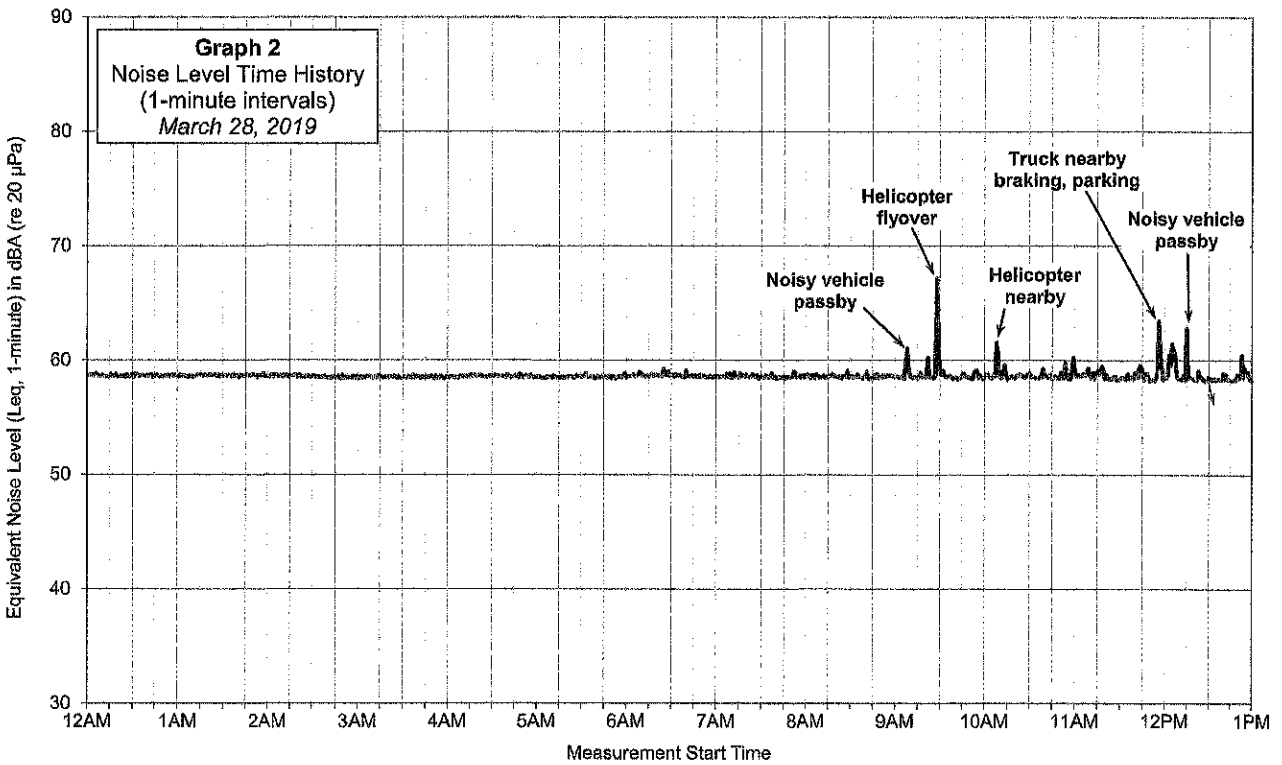
Time of Day	Minimum Measured Water Facility Noise Levels (L50, 1-hour)	SBCC Noise Limit (Category A)	Compliant?	Exceedence
7AM - 10PM	58.4 dBA	55 dBA	NO	3.4 dBA
10PM - 7AM	58.5 dBA	45 dBA	NO	13.5 dBA

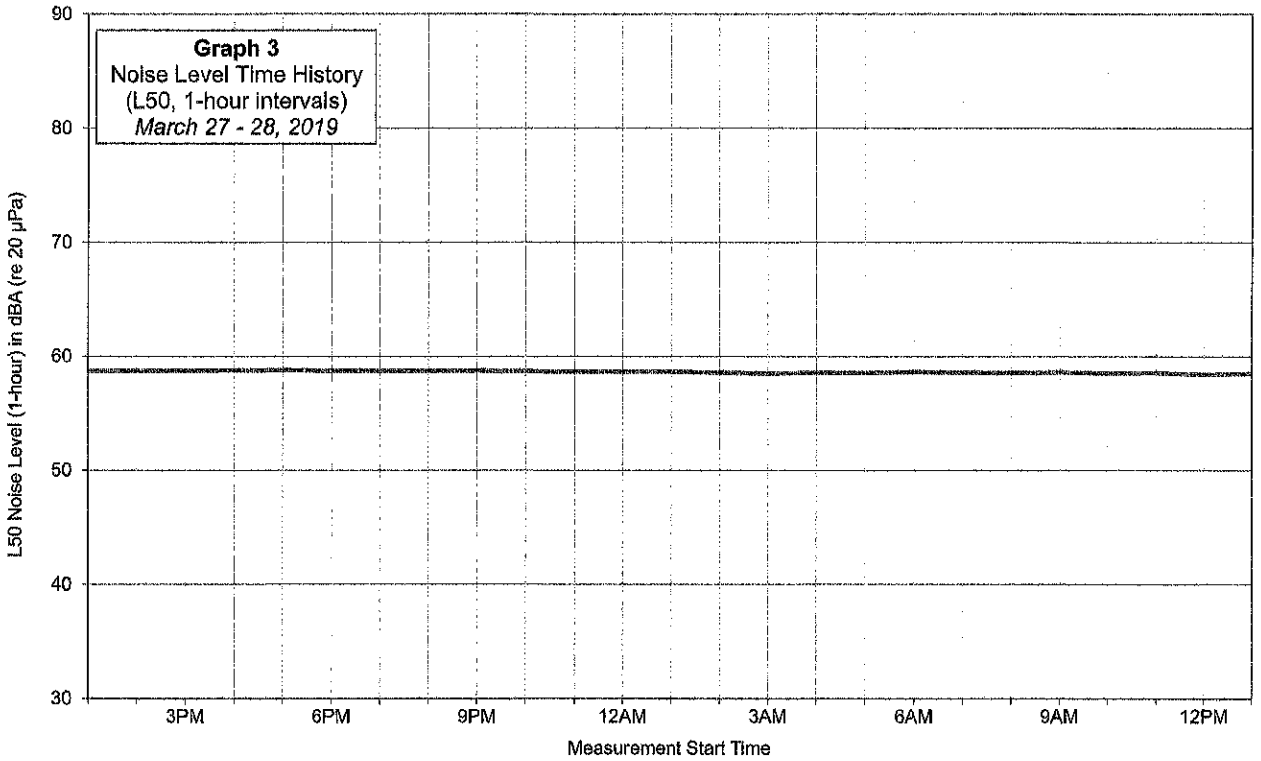
6. Conclusion

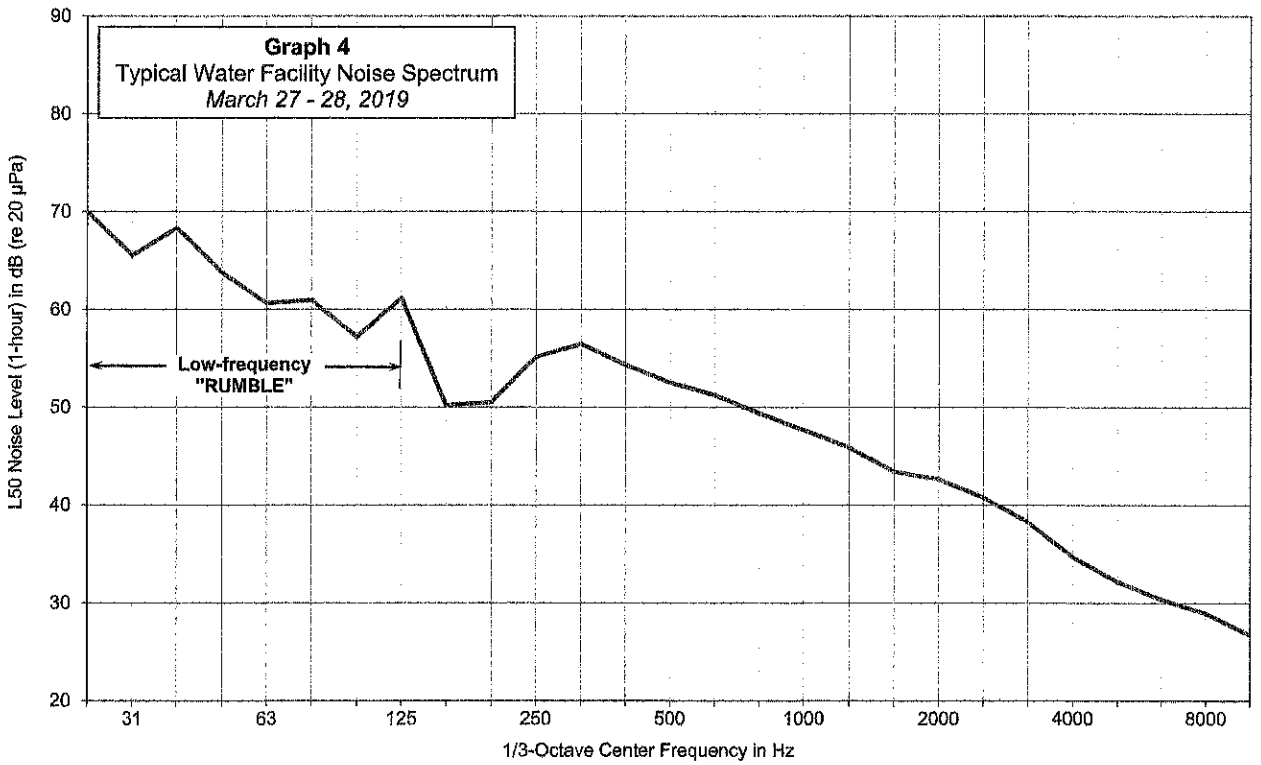
Noise data collected over a continuous 24-hour period by a noise monitoring system installed at 2351 Paloma Curve, Upland, California on March 27 - 28, 2019 proves that water facility operated by San Antonio Water Company on the property does not comply with the noise regulations in the San Bernardino County Code of Ordinances (SBCC).

Water facility noise was found to exceed Noise Limit Category A in the SBCC by as much as 13.5 dBA.


Graph 1
Noise Level Time History
(1-minute intervals)
March 27, 2019
Helicopter flyover
Loud music from a passing vehicle
Distant aircraft
Noisy vehicle passby
Equivalent Noise Level (Leq, 1-minute) in dBA (re 20 µPa)
90
80
70
60
50
40
30
1PM
2PM
3PM
4PM
5PM
6PM
7PM
8PM
9PM
10PM
11PM
12AM
Measurement Start Time


Graph 2
Noise Level Time History
(1-minute intervals)
March 28, 2019
Truck nearby braking, parking
Helicopter flyover
Noisy vehicle passby
Helicopter nearby
Noisy vehicle passby
Equivalent Noise Level (Leq, 1-minute) in dBA (re 20 µPa)
90
80
70
60
50
40
30
12AM
1AM
2AM
3AM
4AM
5AM
6AM
7AM
8AM
9AM
10AM
11AM
12PM
1PM
Measurement Start Time


Graph 3
Noise Level Time History
(L50, 1-hour intervals)
March 27 - 28, 2019
L50 Noise Level (1-hour) in dBA (re 20 µPa)
90
80
70
60
50
40
30
3PM
6PM
9PM
12AM
3AM
6AM
9AM
12PM
Measurement Start Time


Graph 4
Typical Water Facility Noise Spectrum
March 27 - 28, 2019
L50 Noise Level (1-hour) in dB (re 20 µPa)
90
80
70
60
50
40
30
20
Low-frequency
"RUMBLE"
31
63
125
250
500
1000
2000
4000
8000
1/3-Octave Center Frequency in Hz

APPENDIX A: Acoustical Terminology

dB	Human perception of loudness is logarithmic rather than linear. For this reason, sound level is usually measured on a logarithmic decibel (dB) scale. A change of 10 dB equates to a perceived as a doubling (or halving) of loudness, while a change of 3 dB is generally considered to be just perceptible.
dBA	A-weighting is the application of a frequency-weighted scale designed to reflect the response of the human auditory system, in which low frequencies are attenuated, while mid and high frequencies are emphasized. A-weighted sound levels are expressed as dBA.
LN	LN is a statistical descriptor for time-varying noise conditions and also to regulate noise from intermittent sources - such as air-conditioning units - that cycle on and off over time. For example, the L50 would be the noise level (over a stated measurement period) that is exceeded for 50% of the time. Another way to describe the L50 would be the noise level that is exceeded for a cumulative period of 30 minutes in any hour. Similarly, the L25 is the noise level exceeded 25% of the time - or 15 minutes in any hour - and so on. Noise Limit Categories A, B, C and D in Section 83.01.080 of the San Bernardino County Code of Ordinances are defined as LN values.
Leq	The Equivalent Noise Level (Leq) is an energy-average of noise levels over a stated period of time. Leq is the basic unit of environmental noise assessment in the United States.
Lmax	Lmax is the maximum level of noise during a defined measurement period. Noise Limit Category E in Section 83.01.080 of the San Bernardino County Code of Ordinances is defined as an Lmax value.

APPENDIX B: Calibration Certificates

CERTIFICATE OF CALIBRATION
24338-1
FOR BRÜEL & KJÆR
HANDHELD ANALYZER

Model **2250** Serial No. **3008937**
ID No. **N/A**

With Microphone **4189** Serial No. **3004800**
With Preamplifier **ZC0032** ID No. **23086**

Customer: **Steve Rogers Acoustics, LLC**
Los Angeles, CA 90064 P.O. No. **Verbal/Steve Rogers**

was tested and met Brüel & Kjær specifications at the points tested and as outlined in IEC 61672-3:2006 Class 1

on **27 SEP 2018** **BY** **HAROLD LYNCH**
Service Manager

As received and left condition: Within Specification.
Re-calibration due on: **27 SEP 2019**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	1049	1288946	30 OCT 2017	30 OCT 2018
B&K	2636	1601487	16 MAY 2018	16 MAY 2019
B&K	4226	1774068	16 MAR 2018	16 MAR 2019
B&K	4231	2094472	16 FEB 2018	16 FEB 2019
HP	34401A	US36071531	12 JUN 2018	12 JUN 2019
HP	3458A	2823A17713	17 AUG 2018	17 AUG 2019

Performed in Compliance with ANSI, NCSL Z-540-1, 1994 and ISO 17025, ISO 9001:2015 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left" conditions.

Reference Test Procedure: **ACCT Procedure 2250-Light-2270 Version 3.2.1.** *Rev. 1/29/14*

Temperature	Relative Humidity	Barometric Pressure
23°C	45 %	986.98 hPa

Signed:

ODIN METROLOGY, INC.
CALIBRATION OF BRÜEL & KJÆR INSTRUMENTS
3533 OLD CONEJO ROAD, SUITE 125 THOUSAND OAKS CA 91320
PHONE: (805) 375-0830 FAX: (805) 375-0405

Odin Metrology, Inc.
Calibration of Sound & Vibration Instruments

Certificate Number: **24338-2**

Certificate of Calibration for
Brüel & Kjær 1/2" Free-field Microphone

This calibration is performed by comparison with measurement reference standard microphone:

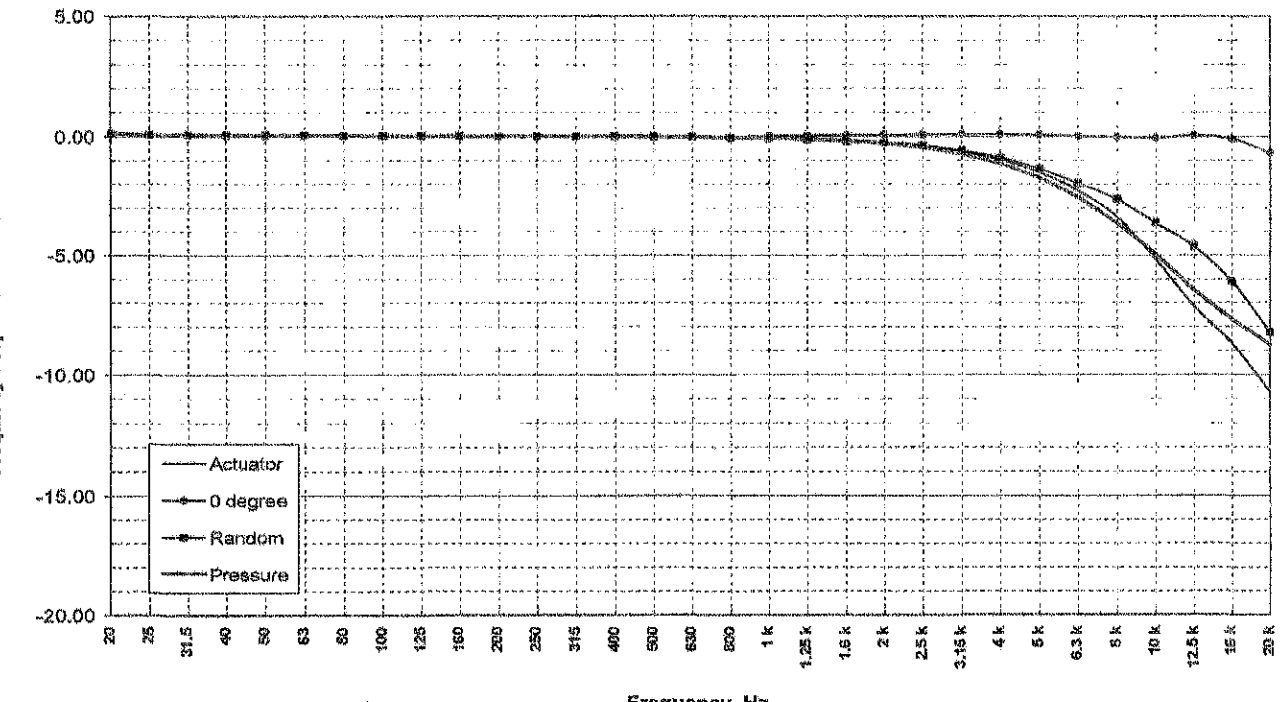
Reference Standards	
Type No.	4134/UA0825
Serial No.	1866524
Calibrated by	DANAK
Cal Date	09 OCT 2017
Due Date	09 OCT 2019

Type no.	**4189**
Serial no.	**3004800**
With preamplifier type no.	**N/A**
Preamplifier Serial no.	**N/A**
Submitted by	**Steve Rogers Acoustics, LLC Los Angeles, CA 90064**
Purchase order no.	**Verbal/Steve Rogers**
Asset no.	**N/A**

a) Estimated uncertainty of comparison: ± **0.06** dB
b) Estimated uncertainty of reference microphone: ± **0.04** dB
c) Total uncertainty: $\sqrt{a^2+b^2}$ = ± **0.07** dB
d) Expanded uncertainty (coverage factor k = 2 for 95% confidence level): = ± **0.14** dB

Performance Data		
Open circuit sensitivity at 1,013 hPa, 23°C, 50% RH, 251.2 Hz	-26.35	dB re 1 V/Pa
	48.15	mV/Pa
System sensitivity (with preamplifier) at 251.2 Hz	N/A	dB re 1 V/Pa
	N/A	mV/Pa

Microphone Frequency Response Type 4189
S/N 3004800 : Measured 27 Sep 2018



Calibration performed by

Harold Lynch, Service Manager

Condition of Test		
Ambient Pressure	986.98	hPa
Temperature	23	°C
Relative Humidity	45	%
Polarization Voltage	0	V
Frequency	251.2	Hz
Date of Calibration	27 SEP 2018	
Re-calibration due on	27 SEP 2019	

Odin Metrology, Inc.
3533 Old Conejo Road, Suite 125
Thousand Oaks, CA 91320
Phone: (805) 375-0830; Fax: (805) 375-0405

The calibration data is both "as found" and "as final." At the time of calibration this microphone was found to be **within** the manufacturer's specifications.
Calibration Procedure: **OM-P-1008-Microphone Rev. 1.2 20130618.**

This calibration is traceable to DANAK/DPLA No. **M2.10-1185-2.1** and through inter-laboratory comparisons to NIST Test Number: **TN-683/286992-15** for transfer standard **4160# 512338 24 JUN 2015.** *See page 2 Traceability.

San Antonio Water Company

Incorporated October 25, 1882
Serving the original Ontario Colony lands

May 16, 2019

Mr. Timothy Kassouni
Kassouni Law
621 Capitol Mall, Suite 2025
Sacramento, CA 95814

Subject: 2351 Paloma Curve, Upland

Mr. Kassouni,

I have reviewed your letter dated May 3, 2019. I also understand that there were prior discussions with the previous General Manager regarding the subject property. It does not appear, in part by your letter, that those prior discussions resolved any issues.

As you know, the subject property was originally owned by the Company. We have utilized that property and the water works upon it continuously for decades. When the property was originally sold by the Company to a previous owner, an easement was established to the Company's benefit. That easement existed when Mr. Goodman purchased the property from its previous owner, and that easement remains today. The Company continues to exercise its rights to said easement. Because it is integral to the Company's operation, we have no intention of releasing those rights.

As a gesture of goodwill, the Company is willing to consider installing sound dampening devices on our facilities. I have initiated the research and design of sound dampening devices to determine if there is an effective solution to Mr. Goodman's complaint. If our review indicates a cost-efficient solution exists, we will move forward with installation. I trust that this would satisfy Mr. Goodman's concerns.

Additionally, the City of Upland and Company facilities are physically integrated to some degree. If the City decides to remove their facilities, proper coordination will be imperative to provide the Company's continued utilization of our facilities. We would be happy to assist in said coordination.

Sincerely,

Brian Lee,
General Manager

Cc: Rosemary Horning, City of Upland

Agenda Date: March 15, 2022

Agenda Item No. 6B

Item Title: Holly Drive Reservoir, Phase III Design Services

Purpose:
To consider a proposal from TKE Engineering for the Holly Drive Reservoir Phase III project.

Issues:
Should the Board authorize execution of a project management contract?

Manager's Recommendation:
Authorize General Manager to execute contract with TKE Engineering for a not to exceed $105,000 time and material contract.

Background:
The Holly Drive reservoir site has been in design since 2016, undergoing various changes to accommodate increased understanding of the site and water demands in the service area. Originally conceived as the replacement of a single 60,000-gallon tank, the project morphed into the installation of a 120,000-gallon tank and replacement of the existing tank to an additional 120,000-gallon tank. These changes were necessary to meet system fire flow, as researched for the Water Master Plan developed after initiation of the Holly Drive Tank design.

The project is has been split into three phases; Phase I - geotechnical work has been completed. Phase II - construct new reservoir has been completed.

Staff requested a proposal (attached) from the design engineer, TKE Engineering, for the final Phase III - replacing the abandoned 60,000-gallon bolted tank with a new 120,000-gallon tank.

TKE currently has an outstanding contract balance for Phase II of $31k. Staff is proposing those funds be shifted to the Phase III project. The remaining funds would come from Capital Reserves.

The PROC considered this item at their regularly February 2022 meeting and recommended approval by the Board.

Previous Action:
None

Impact on Budget:
$105,000 design and management contract
Full project cost to be developed

TKE ENGINEERING, INC.

February 2, 2022

Brian Lee
SAN ANTONIO WATER COMPANY
139 North Euclid Avenue
Upland, CA 91786

Subject: Proposal to Provide Professional Engineering Services for Holly Drive Reservoir Phase III

Dear Mr. Lee:

Thank you for the opportunity to submit a proposal to provide professional engineering services for the subject project. The proposed scope of services is described in more detail below:

DESIGN SCOPE OF SERVICES

TKE's scope of services is presented in the following paragraphs:

Task 1. 90% Design

90% Design will include drawings, specifications and estimates.

For the drawings, we will prepare a title sheet, construction notes sheet, grading plan sheet, site piping sheet, drainage system plan, pipeline plan/profile sheets, and detail sheet.

The specifications shall be prepared in accordance with SAWCO standards and will be prepared in Microsoft Word format. They will include technical specifications for the SCADA system, structural requirements, lining and painting requirements, and landscape and irrigation.

In addition, we will update the project construction cost estimates. We will use the bidding schedules to prepare the estimates. The bidding schedules will include all material and construction requirements as shown on the drawings and specifications.

Task 2. 90% Design Review Meeting

After the 90% design documents are complete, we will forward the documents together with the updated construction cost estimates to SAWCO staff for review and comment. We will meet with SAWCO staff after their reviews are completed to obtain comments.

Task 3. Final Design

We will incorporate SAWCO's 90% comments and provide SAWCO with hard (Mylar drawings and specifications) and digital copies of the drawings, and specifications for final approval. In addition, we will prepare a final construction cost estimate for the project.

DESIGN FEE

Our budget to provide the design services described is as follows:

	Description	Amount
1.	90% Design	$ 22,300
2.	90% Design Review Meeting	$ 1,000
3.	Final Design	$ 9,500
		Total: $32,800

CONSTRUCTION MANAGEMENT SCOPE OF SERVICES

Construction contract management will include Pre-Construction, Construction, and Post-Construction Services described as follows:

1. Pre-Construction Services

Pre-construction services include contract document advertisement, bidding, award, and contract execution; material submittal review; and pre-construction conference coordination. Pre-construction services, each are discussed in the following paragraphs:

1.1 Bidding, Award, and Contract Execution

TKE will assist SAWCo with a number of activities including advertising, distributing contract documents to perspective bidders, conducting a pre-bid "job walk," responding to bidder RFI's, preparing and distributing addenda, and coordinating the bid opening.

After the bids are received, TKE will review all bids to verify that they have been submitted in accordance with project requirements, verify that the lowest responsive bidder's contractor license is in good standing, and verify that the bidder is qualified to complete the work by discussions with listed experience.

After the lowest responsive bidder is identified, TKE will prepare a board recommendation letter for award.

Once the board approves award, TKE will conform the contracts and deliver them for execution by the lowest responsive bidder. After they execute the contract, TKE will assist SAWCo with execution.

1.2 Team Coordination

TKE will coordinate the project team, including SAWCo staff, Contractor, inspector, geotechnical engineers, materials testing, and other agency staff by advising of the project schedule and specific project requirements. All conferences will be documented.

1.3 Pre-Construction Conference

A preconstruction conference will be held. The conference will be attended by SAWCo staff, TKE's Construction Manager, Construction Inspector and the Contractor. Prior to the conference, we will prepare a conference agenda. At the meeting, we will discuss communication protocol requirements, and procedures for contract submittals, contract administration, job-site access and delivery, and coordination with others. We will document the meeting and distribute meeting minutes to all appropriate parties.

1.4 Material Submittal Review

TKE will prepare a list and review all project submittals. Submittals would include, but are not limited to:

a. Construction Schedule;
b. Emergency Contact List;

c. SWPPP;
d. Valves
e. Air Valves
f. Expansion Joints
g. Catch Basins
h. Steel Reinforcement
i. Rip Rap
j. Reservoir and Appurtenances
k. SCADA Equipment
l. Asphalt Concrete Pavement;
m. Aggregate Base;
n. Portland Cement Concrete; and
o. Equipment and Related Materials

We will maintain a project log for the project and it will include descriptions of submittals, date received, and date returned. Once the submittals have been reviewed and accepted, they will be signed, dated, and sent to the Contractor. Submittals will be returned within the time frame specified by the contract documents. The construction schedule will be a critical document. It will be reviewed to verify compliance with the contract documents and will be reviewed biweekly to ensure construction is proceeding efficiently.

TKE's Construction Manager will meet with the Contractor and Project Inspector on a biweekly basis to review progress, changed conditions, issues and progress payments to ensure the project remains on schedule and that SAWCo staff is fully aware of all project proceedings.

2. Construction Services

Construction Services include the following:

2.1 Construction Administration

Prior to beginning construction and throughout the course of construction, we will meet SAWCo Staff. We will prepare agendas and minutes for each meeting and will respond to questions as required. During construction, the Construction Manager will coordinate all construction activities with the construction inspector, the quality assurance professionals, other agencies and utility companies and project surveyors. In addition, the Construction Manager will visit the job site often to observe construction activities. He will document any observed deviations from the plans and he will advise the Contractor, as appropriate, for resolution of observed deficiencies. In addition, our Construction Manager will conduct biweekly meetings with the Contractor to ensure construction is progressing efficiently. We will prepare agendas and minutes for each, and refer to uncompleted business at each meeting. Also, should incidents or issues arise, Contractor will be required to submit reports regarding each.

Throughout the course of construction, our Construction Manager will respond to complaints from the public. In addition, he will review the construction progress and compare it to the approved project schedule and the contractor of deficiencies.

RFI's and RFC's (including written clarification requests and change-in-plan drawings) will be reviewed and responded to regarding the contract documents in order to ensure that the improvements are constructed in compliance with same;

we will provide said responses as required to minimize delays in construction. All RFI's and RFC's will be logged, including content of inquiry and date relayed and date of response.

Our contract administration activities will include progress reviews to ensure that the project is proceeding according to requirements and schedule, biweekly progress review meetings with the contractor, review of contract change order requests, and payment requests and related services. Payment requests and record keeping will include all correspondence, transmittals, drawings, technical manuals, reports, etc. (both hard copy and electronic formats) related to pre-construction, construction and post-construction phases of each construction contract. The documents will be kept at our office.

Project progress and any changes during construction will be noted on a set of the project's contract documents maintained in our office. If a problem occurs requiring a SAWCo decision, we will consult with staff. The Construction Manager will attempt to resolve complaints, concerns, and questions from residents and other affected agencies without staff assistance.

Through e-mail, telephone conferences, and regular meetings, the Construction Manager will keep staff informed of project progress, problems that have occurred during construction, and any changes in work. Whenever possible, we will review required changes with staff prior to making same.

Each month, we will review the construction payment requests submitted by the contractor for work completed and the construction schedule. In addition, we will verify that certified payroll has been submitted. We will review the work completed and payment requests to ensure that the quantities and amounts requested reflect the actual work completed. After each request has been reviewed (and revised if necessary), we will approve it for payment. We will also submit a monthly status report with each payment request verifying compliance with the project schedule. If the Contractor begins to fall behind the schedule, we will request corrective action.

If change conditions occur, we will negotiate with the Contractor to establish the impact of change conditions and we will attempt to complete negotiations prior to beginning work. SAWCo will be included in all negotiation requiring a contract amount increase. If we fail to reach an agreement and the work must continue, we will direct the Contractor to complete the work. The Construction Inspector document the labor, materials and equipment used for the extra work for use in future negotiations.

We will review any change order request received to determine if said request is warranted. If the change order request is not warranted, we will reject it in writing; prior to sending rejection letters to the Contractor, we will review it with SAWCo staff. If the change order request appears justified, we will review it with the Construction Inspector and compare it with field reports for confirmation of materials, equipment and/or labor involved; we will review same with staff and receive staff's approval prior to preparing and processing the contract change order. Change orders will be prepared on standard forms. Change Orders will be summarized in a log for review at our weekly meetings.

We will ensure that telephone numbers for normal working hours, evenings, and weekends for our staff, contractor, utilities, and emergency services are provided to all concerned parties.

In addition, we will maintain documents and records. We will ensure that the contractor is submitting proper labor reports, time and material reports, material invoices and/or tickets, certifications, warranties and all other such documents as necessary for a complete and successful project.

2.2 Construction Staking

TKE will provide construction staking services required to complete construction. We will prepare grade sheets and we will provide stakes for construction at required locations as established by the Contractor.

2.3 Construction Inspection

TKE will provide part time construction inspection. Our construction inspector will provide daily construction inspection to verify that the project is progressing in compliance with the contract documents. He will regularly discuss anticipated construction activities to ensure quality compliance and surveying is scheduled as needed to ensure the project is proceeding efficiently. We will require strict compliance with requirements for all construction activities. All materials will be reviewed against approved material submittals as they arrive on-site. Batch tickets or weigh certificates will be collected upon material arrival.

Our Construction Inspector will verify SWPPP and safety provisions have been implemented at the start of each work day, at the construction site. Any deviations will be documented. All system service interruptions, connections and abandonments will be coordinated with staff. In addition, TKE will verify all quality testing for the project.

We will digitally photograph the activities and maintain copies in the project files and our Construction Inspector will prepare daily field reports, which will document all observed project activity, including location of the activity, number of workers present, construction equipment used, inspector present, weather conditions, and construction progress. All project documentation will be completed on standard forms. All documents will be submitted in hard copy and electronic copy formats. TKE will provide all inspection equipment needed.

2.4 Coatings Inspection

TKE is proposing to use Harper and Associates for tank lining and coating inspection. Coating and painting quality control inspection will include, coating surface preparation inspection, prime coat inspection, finish coat inspection, final inspection, dry film thickness, and holiday detection.

2.5 Materials Testing

LOR Geotechnical will provide quality testing services for the project including material testing and compaction testing. TKE will review all test reports completed by LOR to verify contract compliance. Materials testing costs are budgeted amounts only and will be billed based on the actual time expended for testing purposes.

3. Post Construction

Post construction services include the following:

3.1 Construction Close-Out

TKE will establish punch-lists for project completion, deliver maintenance bonds and/or manufacturer warranties, operations and maintenance manuals are provided, and all other construction requirements have been completed.

Through the course of construction, TKE will document changes on a set of record drawings. Once the project has been completed, TKE will prepare record drawings and provide them. They will be signed and stamped by the construction manager and will reflect the improvements as constructed. Said record drawings will be based on data furnished by the Contractor, and our weekly field reports.

We will forward copies of all records in digital format and we will prepare a summary of construction changes, final cost, and schedule revisions. In addition, TKE will provide a final narrative summary report documenting construction activities.

CONSTRUCTION FEES

Based on the construction documents, we estimate a period of two and a half months for construction. Using this duration and knowledge of the contract documents, TKE has budgeted the following:

	Description	Amount
1.	Pre-Construction Services	
	1.1 Bidding, Award and Execution	$ 4,300
	1.2 Team Coordination	$ 2,070
	1.3 Pre-Construction Conference	$ 2,180
	1.4 Material Submittal Review	$ 5,200
2.	Construction Services	
	2.1 Construction Administration	$ 12,540
	2.2 Construction Staking	$ 3,680
	2.3 Construction Inspection	$ 17,600
	2.4 Painting and Coating Inspection	$ 15,000
	2.5 Materials Testing	$ 4,000
3.	Post Construction Services	
	3.1 Construction Close-Out	$ 3,490
	Subtotal:	**$70,060**
	Reimbursables:	**$ 1,200**
	Total:	**$71,260**

The total amount for both design and construction services is $104,060. Based on our current PO with SAWCO we show an available balance from Phases 1 and 2 of $31,400. Therefore, TKE requests SAWCo adjust our current PO amount by $72,660. We will invoice SAWCO monthly in accordance with our rate schedule. Our invoice will not exceed the amount presented above without prior approval.

Again, thank you for the opportunity to submit our proposal to provide professional engineering services for the San Antonio Water Company. If you have any questions, please contact me at (951) 680-0440.

Sincerely,

Terry Renner, P.E., Q.S.D.
Senior Vice President
TKE Engineering, Inc.

Agenda Date: March 15, 2022

Agenda Item No. 6C

Item Title: Holly Drive Booster Station Screening

Purpose:
To discuss a proposal from Soltis and Company, Inc for the Holly Drive Booster Station Screening.

Issues:
Should the full Board authorize execution of this contract?

Manager's Recommendation:
Authorize General Manager to execute contract with Soltis and Company for a not to exceed $13,520 contract.

Background:
The Holly Drive Booster Station has undergone significant upgrades in the last few years, from an underground vault-style booster station to an above ground building and finally, the installation of a back-up generator. The neighboring homeowner has expressed concern regarding the visual changes that have occurred. Staff has worked with the homeowner and hired Soltis Landscaping to prepare a plan for visually softening and shielding the new station.

The PROC considered this item at their regularly February 2022 meeting and recommended approval by the Board.

Previous Action:
None

Impact on Budget:
$15k total project budget to come from Capital Reserves.


GENERAC
GENERAC

SOLTIS AND COMPANY, INC.
landscape construction · landscape maintenance
landscape craftsmen since 1989

January 26, 2021

Mr. Brian Lee
San Antonio Water Company
139 N. Euclid Avenue
Upland, California 91784

Re: Water Generator Screening

Dear Brian:

Our proposal is per the following summary:

Generator Screening

Demolition (1800 SQ)	$	594.00
Mulch (4 CY)	$	260.00
Landscape - Trees (6-36", 3-24")	$	8,730.00
Landscape - 1 Gal Shrubs (20 ea)	$	420.00
Existing Rock Remodeling (1800 SQ)	$	2,250.00
Irrigation System (1800 SQ w/ Bubbler Valves)	$	1,620.00
90 Day Maintenance Period	$	500.00
Total	**$**	**13,520.00**

Important Job Concerns

Specific Job Qualifications and Exclusions:

1. Saturday work is not included in this proposal.
2. Water Restrictions in Affect – There is no warranty for dead or dying plant material because of the current mandated water restrictions.
3. Soltis and Company General Conditions of Proposal apply to this bid. Please see attached form.
4. This bid is based on the contract being awarded within 45 days from the date of this document.
5. Finish grade to be received within 1/10th of a foot.
6. We have estimated this project to be installed per our breakdown with one move on per phase. Additional move one will be an extra to this agreement at the cost of $850.00 per occurrence.
7. All perimeter walls and fencing to be installed prior to move-on.
8. Any extraordinary rock excavation is not included in this proposal. Export of rock debris by others.
9. This bid excludes surveying and staking.

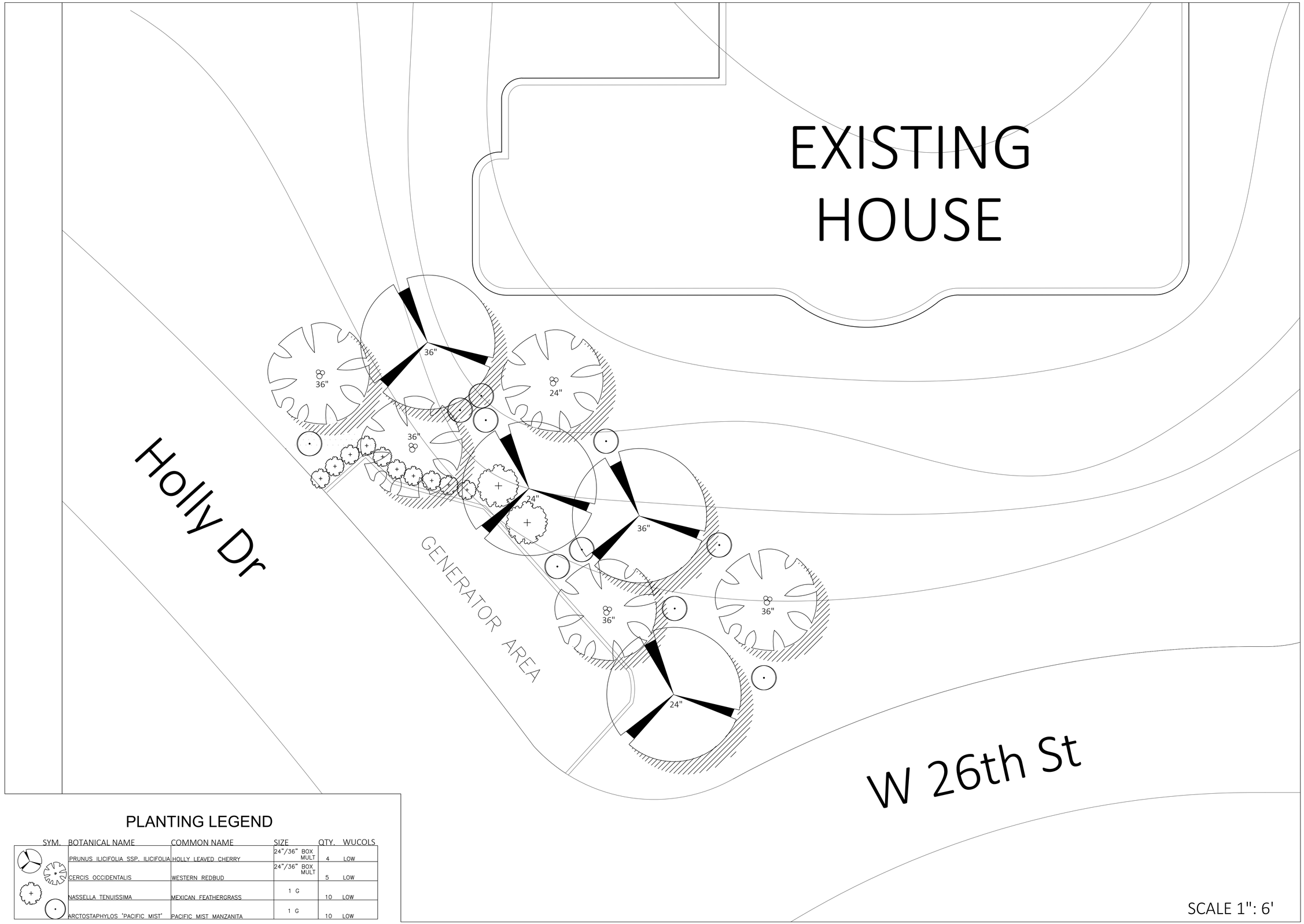
Soltis and Company, Inc. has your best interests in mind. As we perform this work for you we will ensure you to ease your mind with our quality, safety standards, and professionalism. I assure that you will look forward to continuing a long lasting relationship with our company.

Sincerely,

Chloe Soltis
Project Manager
Soltis and Company, Inc.

General Conditions of Proposal:

- Permanent POWER and WATER shall be provided prior to planting operations. Excludes all power and water costs.
- ALL Permits by others. Including but not limited to: Electrical, Landscape, Overhead Structures and Encroachment.
- Proposal based on **STANDARD** wages.
- **Price is valid for 45 days.**
- Pricing is based on TWO move-ins. One for sleeving and one for construction. Additional mobilizations will be charged at $850.00 each. Move ins are considered to be situations where we are called out to work and the areas are not ready or we have to pull off because the areas are not ready. Most common situations are walls not being ready, grade not being ready and sidewalks not ready.
- Hazardous waste removal and disposal shall be by others.
- Backfill to be Native Soil @ 90% Compaction. Testing by others.
- All spoils shall be lost on site.
- All rocks larger than a 310 John Deer Backhoe can take out will be removed on a T&M basis.
- No demolition, removals, rock removal, clearing, grubbing or trenching of bedrock or hardpan.
- Traffic control, survey, hot tap, coring, disposal, site ripping, boring, jacking, and hydraulic drilling are excluded.
- All pipe shall be installed prior to paving.
- Water meter and all work upstream of water meter including installation fees, permits or inspections, shall be by others.
- Site to be received clean and in a weed free condition. All areas not requiring import material such as sand, decomposed granite, or rock shall be received @ +/- 0.10' of finish grade. Any areas requiring any of the above import materials by Soltis and Company, Inc. shall be received @ +/- 0.10' of sub grade elevations.
- Design, implementation, and maintenance of the Storm Water Pollution Prevention Plan shall be by others.
- **No import or export of soil.**
- Soltis and Company is a NON-UNION company. This bid proposal is completely void if any Union affiliation is stated or unstated. No contract or master contract will be valid if Union affiliation is part of the agreement.
- Bond not included in bid price.
- Price is based on a Phased working day schedule.
- Retention shall be billed and paid progressively.
- All payments are due and payable upon receipt of invoice. Any payments not received when due shall bear interest at the rate of 1 ½ percent per month on the amount which is past due. Should it become necessary to institute suit to collect moneys pursuant to this contract, Soltis shall be entitled to collection of its actual costs so incurred including its actual attorney's fees.
- These conditions must be made part of any contract or agreement. Deletions or modifications to these conditions will void this proposal or result in modified pricing, at the discretion of Soltis and Company, Inc.
- Pricing excludes overtime, weekend work, and accelerated schedules.
- Pricing is based on free and clear job-site with no interfering debris, rubble, trash, scaffolding, etc.
- Pricing is based on free and clear crane and equipment access.
- Maintenance will be **90 days** from substantial completion. Substantial completion will be based on a phase by phase basis or once the landscaping is complete. The start of maintenance will not be delayed for punchlist items or plant establishment.
- Landscape and Irrigation shall be maintained by a licensed landscape contractor for the period after the **90 day** maintenance if extended maintenance is not accepted. Warranty does not cover neglect by the licensed contractor that takes over the maintenance.
- Mobilization will be billed at the start of the project.
- Retention will be reduced to 80% withheld 30 days after completion of project.
- Concrete Work and Pavers Notes: all paver work is excluded unless specifically stated as a cost line item. Pavers in driveways walk ways, landscape areas and all other areas are specifically excluded unless specifically asked to bid this item. We assume that this work would be handled by the Masonry or Concrete Contractors.
- Frost Damage: Frost can kill plant material. There is no perfect protection from frost damage. Using larger more established plant material can help as well as using plant material that can handle the severe weather. There are sprays available that are supposed to help with the frost, but nothing is guaranteed to work 100% of the time. The onetime cost to spray shrubs up to an 8,000 sf area would be $350.00.
- Gopher/Rodent Control: Gopher control will be charged as an additional cost and is not part of the standard maintenance cost. The onetime application cost to provide gopher control for areas up to 10,000 sf would be $350.00. Additional applications will be charged on an as needed basis. Gophers are usually an existing condition that tends to be more active when the installation of new landscape and irrigation is performed. Gophers/Rodents can also come into projects from the surrounding areas.
- Maintenance: Our maintenance is for the establishment of the plant materials and general upkeep of the planting areas. Our maintenance crews will address jobs on an individual basis and schedule their time at each site as needed. We are not responsible for water costs associated with mainline or lateral breaks. These repairs will be made in a timely manner when we are alerted of, or discover ourselves, such an incident.



PLANTING LEGEND

SYM.	BOTANICAL NAME	COMMON NAME	SIZE	QTY.	WUCOLS
	PRUNUS ILICIFOLIA SSP. ILICIFOLIA	HOLLY LEAVED CHERRY	24"/36" BOX MULT	4	LOW
	CERCIS OCCIDENTALIS	WESTERN REDBUD	24"/36" BOX MULT	5	LOW
	NASSELLA TENUISSIMA	MEXICAN FEATHERGRASS	1 G	10	LOW
	ARCTOSTAPHYLOS 'PACIFIC MIST'	PACIFIC MIST MANZANITA	1 G	10	LOW

SCALE 1": 6'

SOLTIS
869 W. 9th St.
Upland, Ca 91786
P. 909.346.1111
chris@soltislandscape.com
dbenson@soltislandscape.com

PROJECT TITLE:
GENERATOR SCREENING
2620 HOLLY DR.
UPLAND, CA 91784

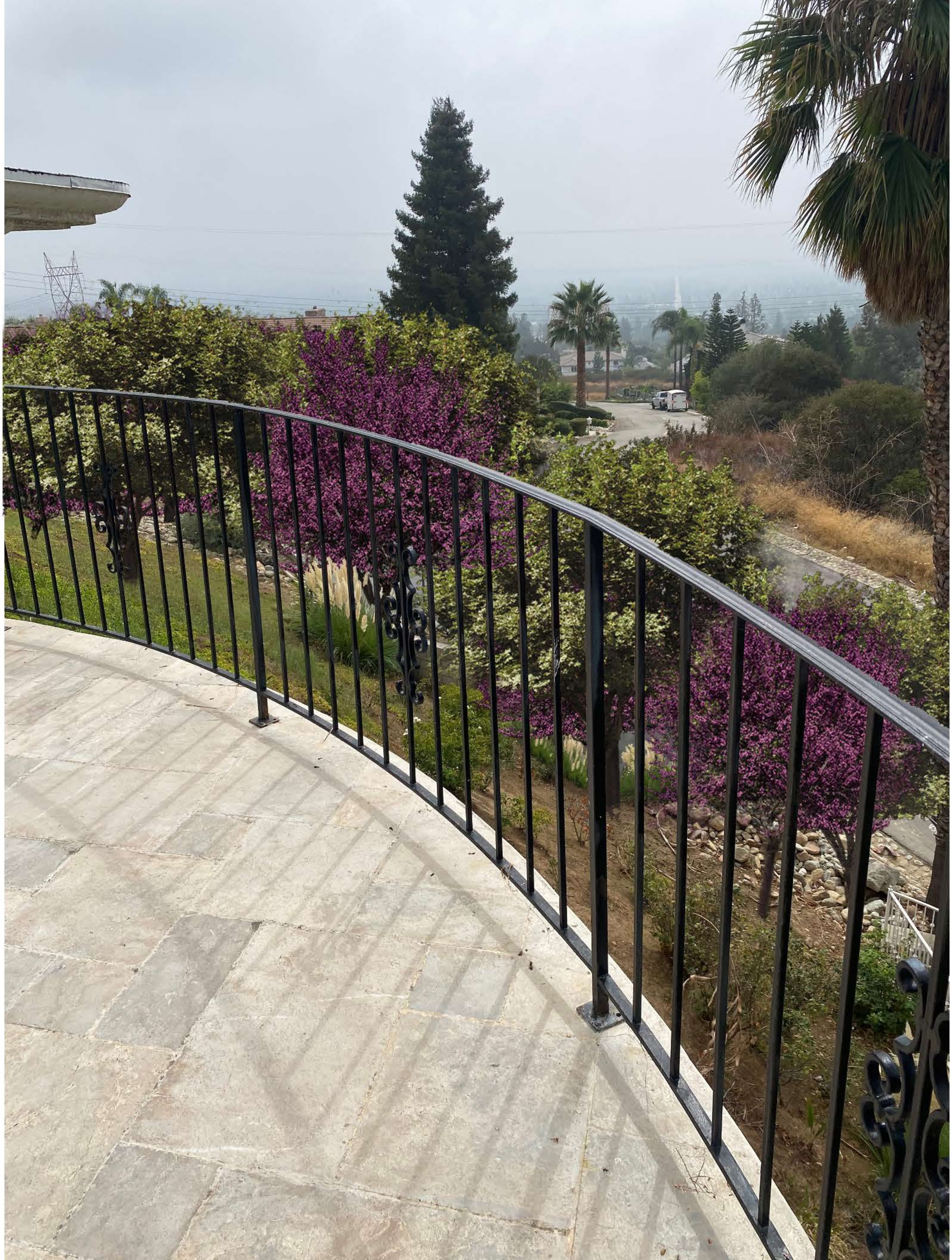
NO.	REVISIONS
1	

SHEET TITLE:
CONCEPTUAL SITE PLAN

DRAWN BY: C.M.S.
CHECKED BY: D.B.
DATE: 01/26/2022
JOB NO: B205

SHEET:
L-1

SHEETS 1 OF 1



Agenda Date: March 15, 2022

Agenda Item No. 6D

Item Title: Well 19 Construction

Purpose:
To discuss a proposal from BEEST to construct a new Well 19.

Issues:
Should the Company consider construction of an expanded test well?

Manager's Recommendation:
None.

Background:
Staff has been working with BEEST on development of specifications for a new production Well 19 within the Cucamonga Basin. Staff originally proposed to construct a test well/pilot hole in 2022. As plans continue to progress the concept of constructing a permanent outer well wall during testing along with striated testing levels within the well has risen as a potential concept. The upfront cost to construct a more permanent casing along with the test well is significantly higher than constructing a simple test well. Staff originally budgeted $175k in 2022 for the test well. A modified test well that would transition into a permanent well would cost an estimated $1,131,000. Staff brought this item to the PROC for discussion in February. The Committee agreed to move this item to the full Board regarding the direction this project is heading before committing additional time.

Previous Action:
None

Impact on Budget:
To be determined

Project Title: **Well Site 19**

Total Budget: **$2,500,000**
Engineering: $500,000 ($330k reserved in 2021) ($25,000 in 2022)
Construction: $2,000,000 ($150,000 in 2022)

Schedule:
Engineering: ~~June 2021~~ January 2022 – ~~March~~ November 2022
Bidding: ~~June-July~~ early 2023
Construction: ~~October 2022 – February 2023~~ mid to late 2023

Location:

Justification: The 2008 Master Plan recommended a new well to meet supply requirements. Construct a new well at Site 19 was identified in the 2017 Master Plan as a high priority project.

Staff is proposing the design and construction of a pilot hole and full well design in 2022. The pilot hole is intended to provide hydrogeologic information regarding material and estimated yield of proposed production well.

12/22/2021
TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS FOR DRILLING, CONSTRUCTION, DEVELOPMENT AND TESTING OF TEST HOLE [SITE NAME]

SAN ANTONIO WATER CO.
BRIAN LEE
139 N. EUCLID AVENUE
UPLAND, CA 91786

CONTENTS

CONTENTS – continued

I. SCOPE OF WORK

In accordance with a request from **[OWNER]**, Layne Christensen has prepared these Technical Specifications for the drilling, construction, development, and testing of one (1) [WELL NAME] test well to be located at [LOCATION DESCRIPTION] location map as shown on **[Figure 1 – attach GPS picture of site]**. The purpose of the test well is to profile water quality for a production well to be completed at this site.

The following definitions apply to these Technical Specifications:

OWNER:	**SAN ANTONIO WATER CO.** **Attention: BRIAN LEE** **139 N. EUCLID AVENUE** **UPLAND, CA 91786** **EMAIL: Blee@sawaterco.com**
CONTRACTOR:	**Drilling company whose authorized representative has signed the proposal.**
SUBCONTRACTOR:	**Any company hired by and managed by CONTRACTOR to perform specific duties and/or provide materials or equipment.**

The well specified herein shall be drilled using direct or reverse-circulation mud rotary drilling method to a depth of 1,200 feet below land surface. Actual drilled depths for the well may be modified by hydrogeologist during drilling, based on subsurface conditions encountered. The test well will be developed by swabbing and air-lift pumping

CONTRACTOR shall obtain necessary drilling permits prior to commencement of drilling and testing. **OWNER** shall be responsible for obtaining the necessary NPDES permits or have a location for the development water to be disposed of which complies with all state and federal regulations. Final completion of all drilling and testing operations is required by [DATE]. Notice for awarding contract is anticipated to be [DATE]; written authorization to proceed is anticipated to be complete by [DATE].

The work to be conducted by **CONTRACTOR** includes the furnishing of all labor, materials, tools,

supplies, equipment, transportation, appurtenances, and services, unless specifically excepted in these Technical Specifications, necessary for the complete and satisfactory drilling, construction, and testing of one [WELL NAME]. Any part of the work which is not mentioned in the Technical Specifications, but which is necessary or normally required as a part of such work, or is necessary or required to make the well satisfactorily complete and operable, shall be performed by **CONTRACTOR** as incidental work without extra cost to the **OWNER**, as if fully described in the Technical Specifications, and the expense thereof shall be included in the mobilization/demobilization line item.

A. LOCATION OF WORK

The proposed well site is located on **OWNER's** property, [DESCRIPTION OF LOCATION]. Approximate location for the proposed well is shown on **Figure 1**.

B. BOUNDARIES OF WORK

OWNER shall make suitable provisions for access to the well site. **CONTRACTOR** shall not enter onto or occupy with personnel, tools, equipment, or materials, any ground outside the specified work or storage area without the consent of the **OWNER**. Other contractors and employees or agents of the **OWNER** may, for all reasonable and necessary purposes enter upon the work and premises used by **CONTRACTOR**. **CONTRACTOR** shall conduct activities so as not to unnecessarily impede any work being done by others on or adjacent to the site.

Limited storage area for **CONTRACTOR's** drilling equipment, casing, etc., may be made available by **OWNER** at the well site and/or at other property controlled by **OWNER**.

C. EXAMINATION OF SITE BY CONTRACTOR

Prior to submittal of the Proposal, **CONTRACTOR** will be required to visit the site.

OWNER shall not be liable for any loss sustained by **CONTRACTOR** as a result of **CONTRACTOR's** failure to thoroughly examine the site and to thoroughly review existing data, reports, and these Technical Specifications.

In the event subsurface or latent physical conditions are found to be materially different from those indicated in these Technical Specifications, and differ materially from those ordinarily encountered and generally recognized as

inherent to the character of work covered in these Technical Specifications, **CONTRACTOR** shall promptly, and before such conditions are disturbed, notify **OWNER** in writing of such conditions. **OWNER** shall investigate such conditions promptly and, following this investigation, **CONTRACTOR** shall proceed with the work, unless otherwise instructed by **OWNER**. If **OWNER** finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performing the work, **OWNER** shall make the adjustments in cost and time considered reasonable and shall issue a Change Order to **CONTRACTOR**. **OWNER** shall make the final decision on all Change Orders to the Technical Specifications regarding adjustment in cost or time for completion.

D. HYDROGEOLOGIC CONDITIONS

Drilling conditions anticipated at the proposed location will likely consist of gravels and small cobbles to a depth of 200 Ft. BGS, then transitioning into alternating sequences of coarse sands with interbedded silts and clays. Sand beds will likely become finer grained and thinner with depth. The target depth for the pilot hole is 1,200 feet to ensure that enough coarser-grained deposits are encountered to satisfy production demand.

E. HOURS OF OPERATION

The hours of **CONTRACTOR's** work will not be restricted and operations to drill, construct, develop, and test the test well may be conducted on a continuous basis, 24 hours per day, 7 days per week, until the work is completed or **OWNER** instructs **CONTRACTOR** otherwise. **CONTRACTOR** personnel and all **SUB-CONTRACTOR** personnel shall be available when needed for required tasks.

F. ACCESS TO SITE AND SITE PREPARATION

OWNER shall provide legal access to the well site, utility clearance, and shall prepare a level drill pad suitable for construction of the well. **CONTRACTOR** shall be responsible for all other required site modifications.

G. SOUND CONTROL

CONTRACTOR will be responsible in taking all necessary precautions to protect the safety and well-being of the residents in the well site vicinity. Engines and all other equipment shall be equipped with approved exhaust systems and/or noise reduction equipment as directed by **OWNER**. There may be residential areas near the drill site which will require sound reduction walls to be appropriately erected and additional sound reduction

controls to be placed on engines and machinery. The required height (estimate 16 feet high) and composition of the sound reduction walls and additional sound reduction controls shall be approved by **OWNER**. The sound reduction walls shall be clean, free from graffiti, and appear competent and aesthetically pleasing as originally constructed to provide for proper sound control, site protection, and a professional appearance. The sound reduction walls shall be erected with sufficient support that they are not at risk of falling during wind events. The sound reduction walls shall remain in place during all drilling, installation, development, and testing operations.

H. CONSTRUCTION WATER

Water required for drilling and construction of the proposed interceptor well will be made available by **OWNER** from [LOCATION], which meets all state and federal drinking water rules and regulations. It is the responsibility of the **CONTRACTOR** to provide Baker tanks, tank truck, hose fittings, pumps, and other items necessary to store the water and transport water to the well site if there is not a suitable water source on site. This cost should be included in the mobilize/demobilize line item.

I. DRILLING FLUIDS AND DRILL CUTTINGS

The well shall be drilled using direct or reverse-circulation mud rotary drilling method.

Drilling fluids and drill cuttings removed from the well during drilling and development shall be contained at the drilling site in a minimum of 7,500 gallon above-ground portable bins and/or tanks provided by **CONTRACTOR**. Land surface inside and outside the work area at the site shall be kept clean of these materials at all times. **CONTRACTOR** shall be responsible for removal of all drilling fluids and disposal at a certified disposal site. **CONTRACTOR** will be required to submit proof of disposal of all drilling fluids including analytical results to **OWNER** prior to payment.

If water removed from the well during development and pumping test operations is substantially free of drilling fluids and suspended material, **CONTRACTOR** may discharge the water to land surface at locations identified by **OWNER**. **OWNER** shall apply for and obtain all permits required for discharge of water or any other substances on or off site, and shall implement any compliance monitoring required for the discharge, if applicable. **CONTRACTOR** shall ensure, at its expense, that the discharged water does not create a nuisance or safety hazard, and that the discharge is in accordance with National Pollutant Discharge Elimination System (NPDES) permits and

any other permits required for discharge of water on or off site. **CONTRACTOR** shall be responsible for all costs associated with unauthorized and unapproved discharges.

A list of potential drilling fluid additives that may be required during drilling operations, together with Material Safety Data Sheets, shall be submitted to **OWNER** by **CONTRACTOR** prior to commencement of drilling operations.

CONTRACTOR shall, at all times, maintain the drilling fluid characteristics to minimize formation damage while providing sufficient stabilization, as necessary, of the borehole wall. When proper drilling fluid characteristics can not be maintained by **CONTRACTOR**, **CONTRACTOR** shall employ, at its expense, an experienced qualified mud engineer at the site during operations to supervise and, at all times, maintain proper drilling fluid characteristics.

J. CONTRACTOR SOUNDING DEVICES

CONTRACTOR shall use appropriate sounding devices to obtain and record periodic measurements of depths during well construction and development operations, including depth to top of annular materials, such as gravel pack and cement, borehole depth, and depth to water. Depth to water shall be measured using an electrical water level sounder, re-calibrated for this project to the nearest foot, and in good operating condition. Other depths shall be measured using a device consisting of a manufactured steel cable wrapped on a reel equipped with an accurate counting device calibrated in feet, a hand crank, and a dual- or triple-pulley system to properly feed the cable through the counting device. References throughout these Technical Specifications to measurements using "**CONTRACTOR** sounding device" shall be interpreted to mean the devices described in this section. All sounding devices shall be made of environmentally-safe materials.

K. DRILL CUTTINGS SAMPLES

During drilling of the borehole, **CONTRACTOR** shall properly collect, label, and preserve for the **OWNER** samples of drill cuttings at 10-foot intervals. **CONTRACTOR** shall provide a sampling procedure acceptable to the **OWNER** that obtains representative samples of the subsurface materials being drilled. **CONTRACTOR** shall: 1) provide unwashed and quart-sized samples of drill cuttings; 2) place the samples in suitable, tightly sealed, waterproof containers (such as sealable plastic bags); 3) clearly label the containers with the well identifier and the accurate depth

interval sampled; and 4) store the samples at the site in a secure location that prevents damage or loss of the samples and that is convenient and safe for **OWNER** to conduct sample inspections.

L. DRILL TEST BOREHOLE

CONTRACTOR shall drill a borehole using direct or reverse-circulation mud rotary drilling method, at approximately 14 inches in diameter to a depth of 1,200 feet below land surface. Actual drilled depths for the well may be modified by hydrogeologist during drilling, based on subsurface conditions encountered.

M. BOREHOLE GEOPHYSICAL LOGGING

After drilling of the approximately 14 inch borehole is completed to total depth as directed by **OWNER**, drilling, borehole geophysical logging operations will be conducted by the logging **SUBCONTRACTOR**. Borehole geophysical logs shall include: caliper, natural gamma ray, spontaneous potential, single-point resistance and normal 16 and 64-inch resistivity logs. Depending on borehole conditions and lithology, other logs may be specified by **OWNER**.

N. CONSTRUCT AND TEST LONG-SCREENED TEST WELL (LSTW)

After drilling of the approximately 14-inch borehole is completed to total depth as directed by OWNER, CONTRACTOR shall install 6-inch fiberglass casing to a depth of 1,200 Ft. BGS. Sand and bentonite seals shall be installed in the annulus, between the outside diameter of the LSTW casing and the formation wall of the borehole. The type of sand pack and bentonite and their corresponding depth intervals for installation shall be determined by the chief hydrogeologist. The sand pack, with or without a bentonite seal shall be installed to surface; no sanitary seal is required since the well be drilled out at a later date to be determined by the chief hydrogeologist. The purpose of such reaming will be for the installation of a large diameter potable supply well.

The length of the screened intervals for the LSTW shall be 500 feet, the remaining 700 feet will be blank fiberglass casing. The well screen will be constructed in sections as determined by the chief hydrogeologist and include bentonite seals surrounding the blank casing sections. Following the installation of the LSTW, it will be developed using a combination of air lifting, swabbing and surging and pumping, if necessary, until the water is deemed to be satisfactory by the chief hydrogeologist. Although an NTU level of 10 is an ideal target, that target may

be higher based on practicality with respect to time. The development process shall take place over 24/7 period until the water confirmed with an NTU meter.

CONTRACTOR shall utilize a dye tracer and depth dependent groundwater sampling system to profile the LSTW and provide the electric submersible pump and single attached packer system to perform the testing. A 4-inch electric submersible pump shall be used with an inflatable packer conjoined to the bottom of the pump assembly. The **CONTRACTOR** shall supply a discharge line, flow meter, and ¾" hose bib sample tap attached to the discharge line for measuring flow and for collecting depth dependent groundwater samples. The hose bib shall also be used for monitoring tracer return following each depth dependent injection. A pumping rate of 60 to 120 GPM is anticipated for performing the dynamic flow and chemistry survey. Discharge of the well water during the test will be directly into a waste system covered by **OWNER** pre-existing NPDES permits

Tooling used to perform the tracer flow and depth dependent groundwater sampling shall be small enough to transit within the annulus between the pump drop pipe the and casing ID. The profiling tooling shall be no larger in diameter than 1-inch. The tracer injection shall inject the tracer sideways to facilitate injection of rhodamine dye solution at varying depths in a well while the well is operating at a steady state. The return rate of the injected dye shall provide data that will be analyzed by **CONTRACTOR** team to determine flow dynamics throughout the well. The method must utilize the conjoined version of the USGS technology in conjunction where the injection and groundwater sample tubing is conjoined to eliminate the potential from a double counter error when using two independent profiling devices: that being one for velocity and zonal flow and the other being for downhole water sampling. This means that the tracer and groundwater sampling system is deployed into the well simultaneously and as a single tubing assembly.

TASK 1 – DYNAMIC FLOW PROFILING

The **CONTRACTOR** will perform a dynamic (pumping) velocity and zonal flow profiling of the well using the conjoined version of the USGS well-bore flow method. The tracer used for the survey must be NSF 60 approved and specifically be Rhodamine Red FWT 50 at a concentration of 10 ml dye/1 gallon water. The purpose of the profiling is to determine the velocity of groundwater entering the well across the perforated zones under steady state pumping conditions. Discharge of the well water during the dynamic test will be directly into a waste system covered by pre-existing NPDES permits, and no additional permits will be required.

The **CONTRACTOR** shall prepare an injection and sampling plan (ISP) based on the results from the cuttings and geophysical logging, the ISP showing all the tracer injection and co-located sampling depths. The injection system shall employ sideways injection to ensure that the tracer covers the entire cross-sectional plane of the well at each

injection depth such that the fluorometer return curve represents all the pipe flow conditions inside the well. Otherwise, if the tracer injector is pointing downward or an impeller used as an alternative, the resulting flow error may be large enough such that carryover to the mass balance calculation produces erroneous zonal chemistry results – misguiding the data analysis and interpretation. The financial consequences from these errors are large, so care must be taken by the Team that the sideways injector fitting is always attached to the bottom of the injection nozzle and that the fitting holes are not clogged.

The **CONTRACTOR** shall perform at least three injections at each depth location to ensure reproducibility of the tracer return times to the up hole fluorometer. Once the flow survey is complete, the data will be processed to generate the raw velocity profile. The data will then be converted into cumulative and zonal flow (zonal GPM and zonal percent of total GPM) and presented to **OWNER.** A final decision will then be made to determine if any changes are needed for the groundwater sampling plan.

TASK 2 – DEPTH DEPENDENT SAMPLING

Following the completion of each injection depth, a groundwater sample shall be collected from the same depth, before the conjoined tubing strand is relocated to the next depth indicated on the ISP. The Team will perform sampling using USGS depth dependent sampling technology, preferably in the form of a miniaturized down hole pump. The purpose of the sampling is to identify the groundwater quality at various depths in the well during normal pumping conditions. Up to 20 depths zones will be sampled during the dynamic sampling. **OWNER** will provide sample bottles and will submit the samples to its contract laboratory for analyses. Costs for the laboratory analyses will not been included in contractor's price. **OWNER** will provide the data to the contractor for water quality mass balance analysis and report preparation. Mass balance will be performed for parameters including General Minerals, Metals, PFOS/PFOAs, VOCs and Perchlorate although the actual number of analytes will be determined in consultation with **OWNER. CONTRACTOR** will demobilize from the site by removing all materials brought to the location and leaving the area in the same or better condition than upon arrival.

TASK 4 – REPORTING

In addition to the Video Survey Reports, delivered as part of Tasks 1 within three weeks of receiving the laboratory results from **OWNER, CONTRACTOR** will submit a comprehensive report on the results of Tasks 1 and

2. At a minimum, the report will include the following:

a description of all the work,

a graphic of the well with perforations,

lithology and pump setting, and pumping water levels,

a plot and interpretation of the geophysical logs

discharge rate,

calculated specific capacity,

dynamic profiling results - corrected data for flow velocity (ft/min), discharge (gpm and ft3/min), and percent of total flow in both tabular and graphical format,

water quality results,

mass balance results,

recommendations on well screen design if requested by **OWNER.**

CONTRACTOR will provide two hard copies of the report and an Adobe Acrobat (pdf) copy to **OWNER**

Mass Balance Results – Contractor will use the standard flow and chemistry mass balance equations. The continuity equation will be used as the basis for calculating cumulative and zonal flow and the mass balance equation used for calculating zonal chemistry from the cumulative flow and measured chemistry results. In addition to the items specifically mentioned above, well profiling report will include:

Dynamic and/or ambient zonal water quality graphs (plotted against zonal flow),

A separate graph for each specified analyte,

Tables for zonal flow results and laboratory measured chemistry,

Mass balanced zonal chemistry for each analyte,

A comparison of the actual well head chemistry to the theoretical well head chemistry based on the mass balanced results.

Proper Training:

Contractor and Subcontractor Personnel involved in the Dynamic Flow and Chemistry Well Profiling shall demonstrate proper knowledge of the work required, shall have performed at least 100 profiles and mass balance reports. Contractor shall provide proof with bid of experience requirements.

II. SITE HEALTH AND SAFETY

It shall be the responsibility of **CONTRACTOR** to obtain a copy of **OWNER's** health and safety documentation, and to conduct all work in accordance with **OWNER's** health and safety requirements. **CONTRACTOR** shall employ only sober and competent workmen for the execution of this work. **CONTRACTOR** will be responsible for submitting with proposal a detailed description of the company's drug screening program for workmen. If this program is not acceptable to the **OWNER**, the proposal will be considered incomplete and will be thrown out.

CONTRACTOR shall provide **CONTRACTOR** personnel with the following minimum personal safety equipment: safety glasses, steel-toed boots, gloves, hearing protection, hard hats, and dust respirators. In addition, safety railings, safety harnesses, limitations on work hours, first aid kits, training, etc. and all other equipment and procedures necessary for safe conduct of work shall be provided by and implemented by **CONTRACTOR** without additional cost to **OWNER**. **CONTRACTOR** shall halt work at no additional cost to **OWNER** if for any reason site conditions are not adequate to ensure the safety of on-site personnel.

III. GENERAL TERMS OF AGREEMENT

The Proposal and Quotation Schedule (when completed and accepted by **OWNER**), Technical Specifications, and all addenda do not constitute the complete and final Agreement with respect to the services requested; the **CONTRACTOR** will also execute a General Services Agreement with **OWNER**. This Agreement supersedes all prior communications, representations, undertakings, or understandings of the parties whether oral or written, relating to the services. *However, where terms and/or conditions given in **OWNER's** General Services Agreement, conflict with the terms and/or conditions included in this Proposal, Quotation Schedule, and/or Technical Specifications, the General Services Agreement will be binding on all parties.*

This Agreement shall not be modified except in writing signed by an authorized representative of both parties. **CONTRACTOR** shall not assign its duties and responsibilities under this Agreement to another party without prior written consent of **OWNER**. This Agreement shall be governed by the laws of the State of California that apply to contracts executed and wholly performable within California. The terms of this Agreement are severable, and the invalidity or enforceability of any of them shall in no matter affect or impair the validity or enforceability of the remaining terms.

This Agreement will terminate when the services are satisfactorily completed, provided, however, that **OWNER** may terminate this Agreement with 30 days written notice to **CONTRACTOR**. However, upon material breach of the terms of this Agreement by **CONTRACTOR** or **OWNER** may immediately terminate this Agreement, if **CONTRACTOR** fails to cure such breach within 48 hours after receipt of notice of breach. In the event of termination prior to satisfactory completion of Services, **CONTRACTOR** will be paid for work satisfactorily performed to the date of termination. Confidentiality, Indemnification, and Retention of Records sections of this Agreement shall survive termination.

A. CONFLICT OF INTEREST

During the term of this Agreement, **CONTRACTOR** shall not accept employment or otherwise engage in any work or render any services that are in conflict with the services rendered to **OWNER** under this Agreement. **CONTRACTOR** will promptly notify **OWNER** in writing of any such conflict at the time such conflict arises or is discovered.

B. CONFIDENTIALITY

CONTRACTOR shall not disclose any information relating to **OWNER** or the site to any party other than the **OWNER** its members and agents, without the prior written consent of **OWNER**, except as may be required by law. At all times during the performance of **CONTRACTOR's** services and thereafter, **CONTRACTOR** and its employees and agents shall: 1) so treat the work performed by **CONTRACTOR** and its **SUBCONTRACTORS** (if applicable) and the results thereof as confidential and proprietary to **OWNER**; 2) instruct its employees, agents, and **SUBCONTRACTORS** (if applicable) concerning this obligation of confidentiality; 3) consult with **OWNER** immediately in the event that **CONTRACTOR** or any of its employees, agents, or **SUBCONTRACTORS** receive an administrative request for information, subpoena, or other legal process pertaining to the services (and results thereof) performed by **CONTRACTOR**; and 4) resist such information request, subpoena, or other legal process if **OWNER** asks **CONTRACTOR** to do so, except where such resistance would be a violation of law. If **OWNER** asks that **CONTRACTOR** so resist such a request, **OWNER** shall reimburse **CONTRACTOR** for **CONTRACTOR's** reasonable costs.

Any questions regarding the purpose or scope of work, which are directed to **CONTRACTOR** from individuals other than representatives of the **OWNER** while work is being conducted for the proposed work, should be directed by **CONTRACTOR** to **OWNER**.

C. PERMITS, CERTIFICATES, LAWS, AND ORDINANCES

CONTRACTOR shall, at its expense, obtain all permits, certificates, licenses, and insurance required by law for the execution of its work, unless specifically excepted in this Agreement. **CONTRACTOR** shall inform **CONTRACTOR** of any and all such requirements for this project.

CONTRACTOR shall perform its services in conformance with all federal, state, and local laws, ordinances, rules, and regulations applicable to its services. **OWNER** shall have the right to inspect and obtain copies of all applicable written licenses, permits, or approvals issued by any governmental entity or agency to **CONTRACTOR** for its performance of services under this Agreement.

D. CONTRACTOR INSURANCE REQUIREMENTS

CONTRACTOR agrees to purchase and maintain, at its own expense, insurance coverage as follows:

Coverage	Minimum Limits
Workers' Compensation/Employers Liability	$1,000,000
Commercial General Liability	$2,000,000
Business Automobile Liability Including owned, non-owned, and hired vehicles	$2,000,000
Pollution Liability	$1,000,000

Project specific minimum insurance requirements, if different from these amounts, are included in the Scope of Work included herein and/or the General Services Agreement to be executed between **OWNER and CONTRACTOR**. **CONTRACTOR** agrees to maintain such insurance coverage during the term of this Agreement. **CONTRACTOR** shall name **OWNER** and **OWNER's** shareholders, officers, employees, and agents as additional insured on its commercial general liability

and automobile insurance policies. Insurance must include coverage for explosion and collapse hazards and underground hazards. In addition, for the duration of this contract, **CONTRACTOR** shall satisfy, and shall ensure that its agents and **SUBCONTRACTORS** satisfy all applicable laws and regulations regarding the provision of workers' compensation insurance for all persons performing the work required under this Agreement. **CONTRACTOR** shall provide **OWNER** certificates of such insurance and, on request, a copy of each insurance policy. **CONTRACTOR** shall provide **OWNER** with 30 days advance written notice of change or cancellation in such insurance coverage and, in the event of cancellation, shall obtain comparable insurance coverage immediately. **CONTRACTOR** agrees to name additional parties as additional insured as may be required by **OWNER**.

E. BONDS

CONTRACTOR may be required to obtain a bid, performance, and/or completion bond in an amount to be specified by **OWNER**. If required, **CONTRACTOR** shall provide proof of bond(s) to **OWNER** prior to commencement of work. If bonds are required, types and amounts are included in the Scope of Work included herein and/or the General Services Agreement to be executed between **OWNER** and **CONTRACTOR**.

F. INDEPENDENT CONTRACTORS

Nothing in this Agreement shall be construed to imply that **CONTRACTOR** or any of its employees, agents, or **SUBCONTRACTORS** are the employees, agents, representatives, or **SUBCONTRACTORS** of **OWNER**. **CONTRACTOR** shall be an independent contractor licensed to operate in the State of California, and shall have responsibility for and control over the details of the means of performing its services.

G. SUBCONTRACTORS

CONTRACTOR shall not assign its duties to another party or **SUBCONTRACTOR** without prior written consent of **OWNER**.

1. Conditions for Approval. **CONTRACTOR** acknowledges and agrees that no **SUBCONTRACTOR** can be selected who fails to agree to the following conditions, unless **OWNER** agrees otherwise:

    a. **SUBCONTRACTOR** agrees to maintain and provide evidence of sufficient insurance (as determined by **OWNER**) for any portion of the services to be performed by the **SUBCONTRACTOR** and, if requested by **CONTRACTOR**, to name **OWNER** and their members as additional insured on such policies.

    b. **SUBCONTRACTOR** agrees at all times to comply with the standards and conditions for **CONTRACTORS** contained in this Agreement.

2. Management of **SUBCONTRACTORS**. **CONTRACTOR** shall be responsible for and have control over the means of providing the services, including the direction, management and inspection of any **SUBCONTRACTORS** hired to provide any portion of the services. The hiring of a **SUBCONTRACTOR** shall not relieve **CONTRACTOR** of its duties and responsibilities under this Agreement.

H. NOTICES

Notices required by this Agreement shall be in writing. Notice is deemed given when received by the person specified below or, if mailed, when deposited in the United States Certified Mail, return receipt requested, postage prepaid, and addressed to **OWNER** or **CONTRACTOR**, as indicated in the Scope of Work.

I. RIGHTS AND REMEDIES

The rights and remedies of **OWNER** and **CONTRACTOR** under this Agreement are in addition to and not in limitation of any other rights and remedies provided by law, except as the rights and remedies otherwise provided by law are limited or modified by the express provisions of this Agreement.

J. INDEMNIFICATION

1. **CONTRACTOR** Indemnification. **CONTRACTOR** agrees to defend, indemnify, and hold harmless **OWNER** (including its shareholders, officers, directors, employees, and agents) from and against any and all losses, claims, penalties, judgements, damages, liabilities, expenses, or costs of any kind (including, but not limited to, reasonable legal fees and costs of investigation) resulting from or arising out of: 1) the breach by **CONTRACTOR** of its duties under this Agreement; or 2) the negligence or willful misconduct on the part of **CONTRACTOR**, its employees or agents or **SUBCONTRACTORS** in the performance of services under this Agreement; provided, however, that this indemnification shall not apply to the extent that any such losses, etc., solely result from or arise out of the negligence or willful misconduct of **OWNER** and its officers, directors, employees, or agents (which shall not include **CONTRACTOR** or any **SUBCONTRACTORS**) or any breach by **OWNER** of its duties under this Agreement.

2. **OWNER** Indemnification. **OWNER** agrees to defend, indemnify, and hold harmless **CONTRACTOR** (including its officers, directors, employees, and agents) from and against any and all losses, claims, penalties, judgements, damages, liabilities, expenses, or costs of any kind (including but not limited to reasonable legal fees or costs of investigation) resulting from or arising out of 1) the breach by **OWNER** of its duties under this Agreement, or 2) the negligence or willful misconduct on the part of **OWNER** its officers, directors, employees, or agents; provided, however, that such indemnification shall not apply to the extent that any such losses, etc., solely result from or arise out of the negligence or willful misconduct of **CONTRACTOR** or its officers, directors, employees, agents, or **SUBCONTRACTORS**, or any breach by **CONTRACTOR** of its duties under this Agreement.

3. Indemnification Procedures. A party shall give the other party (the "Indemnifying Party") prompt written notice of any claim that has given or could give rise to a right of indemnification hereunder for itself (the "Indemnified Party"), including without limitation any inquiry or investiga-

tion by a governmental authority or agency that may lead to such a claim. Failure to give such prompt notice shall relieve Indemnifying Party of its indemnification obligation to the extent that any prejudice results from such failure. Upon receipt of such notice, Indemnifying Party shall notify Indemnified Party within 60 days whether Indemnifying Party will assume defense for the matter, at Indemnifying Party's expense, with counsel selected solely by Indemnifying Party. If Indemnifying Party so assumes defense, Indemnified Party may participate in the matter, but at Indemnified Party's sole expense. Indemnified Party shall cooperate fully in the defense. If Indemnifying Party does not elect to defend the claim or fails to defend the claim (after having so elected), Indemnified Party may assume the defense of such a claim and Indemnifying Party shall reimburse Indemnified Party for the expenses of such defense. Indemnifying Party shall not be required to indemnify Indemnified Party for any settlement of any action or any claim entered into without the prior consent of Indemnifying Party, which consent shall not be unreasonably withheld.

K. OWNERSHIP OF DOCUMENTS

All plans, drawings, specifications, designs, construction data, and documents prepared by **CONTRACTOR** or its **SUBCONTRACTORS** in the performance of the services authorized under this Agreement shall be the property of **OWNER**. **CONTRACTOR** shall be entitled to a copy of all such documents, and each **SUBCONTRACTOR** shall be entitled to a copy of each such document prepared by the **SUBCONTRACTOR**.

L. RETENTION OF RECORDS

CONTRACTOR shall keep full and detailed records of the services performed under this Agreement. Upon completion of the services, **OWNER** and **CONTRACTOR** shall determine which records shall be retained by **CONTRACTOR** for a period to be determined by the parties and which shall be delivered to **OWNER**. **OWNER** shall have full access to **CONTRACTOR's** records related to this agreement.

M. MATERIAL AND WORKMANSHIP

All materials that shall become part of the completed work shall be new, unless otherwise specified. All defective work or material shall be removed from the premises by **CONTRACTOR**, whether in place or not, and shall be replaced or renewed in such manner as **OWNER** may direct, at **CONTRACTOR's** expense.

CONTRACTOR shall perform its services in a thorough, efficient, and workmanlike manner, promptly, with the due diligence, care, and skill ordinarily exercised by contractors providing similar services under similar circumstances. **CONTRACTOR** shall employ only competent personnel for the execution of its work. **CONTRACTOR** shall use qualified personnel to conduct work and to keep the same personnel on the project from start to finish. **OWNER** may request that specific personnel be assigned to the project or removed from the project.

Before start of drilling operations, **OWNER** may require written verification that all key **CONTRACTOR** personnel assigned to the project have read and understand these Technical Specifications. **CONTRACTOR** should consult with **OWNER** prior to commencement of services to verify that all key **CONTRACTOR** personnel have read, and understand the Technical Specifications. Key personnel include, at a minimum, the project engineer or manager, all tool pushers, all drillers, and all pump crew foremen.

N. ACCEPTABILITY OF WORK

On all questions concerning the acceptability of materials, machinery, classification of material, and execution of the work, the decision of **OWNER** shall be final and binding upon all parties. After **CONTRACTOR** operations are complete and **CONTRACTOR** has been released by **OWNER**, **CONTRACTOR** shall demobilize its equipment.

O. INABILITY TO COMPLETE

If, in the opinion of **OWNER**, inability to complete services specified in this Agreement was due to faulty materials, workmanship, or operations of **CONTRACTOR**, services shall be completed to the stage at which work on the original well was suspended, without cost to **OWNER**. If, however, inability to complete services was not due to any fault of **CONTRACTOR** whatsoever, the cost of services shall be paid for by the **OWNER** at the contract unit price, and the time for completion may be extended.

In the event of the inability of **CONTRACTOR** to complete construction of a well, if applicable, in accordance with terms and conditions set forth in these Technical Specifications, **CONTRACTOR** shall abandon the well to comply with ADWR rules using a method acceptable to **OWNER**, and shall immediately commence with drilling a new equivalent well, at a location designated by **OWNER** near the abandoned well, to be completed in strict accordance with all the terms and conditions in this Agreement.

P. DELAYS AND PENALTIES FOR LATE START OR LATE COMPLETION

CONTRACTOR's invoices may be reduced for each day **CONTRACTOR** is late, either starting drilling operations, or demobilizing and completing final cleanup operations, beyond the periods or dates specified herein or subsequently amended. Amounts of liquidated damages will be $500 per day.

CONTRACTOR will not be responsible for delays attributable to acts of God, acts of third parties, weather which is not reasonably anticipated, intervention of public authorities, inability (without fault of **CONTRACTOR**) to obtain permits necessary to perform work, work stoppages, changes in applicable laws or regulations after the date of commencement of performance hereunder, and any other conditions or events which are beyond the reasonable control of **CONTRACTOR**. **CONTRACTOR** shall be entitled to additional time to perform the services of this Agreement equal to the time of such delay.

Q. RIGHT OF ENTRY

CONTRACTOR shall ensure that its employees, agents, and **SUBCONTRACTORS** comply with all conditions contained in any rights-of-entry for land on which **CONTRACTOR's** services are performed or through which **CONTRACTOR** must travel to access the area where **CONTRACTOR's** services are performed.

R. PROTECTION OF GROUNDWATER AND ENVIRONMENTAL QUALITY

All **CONTRACTOR** equipment shall be thoroughly cleaned offsite before mobilization to the work site. **CONTRACTOR** shall not use any contaminated equipment for this project. **CONTRACTOR** shall take all necessary and appropriate precautions to ensure that substances or materials, other than those approved by **OWNER** for completion of the proposed work, that could affect the chemical quality of groundwater withdrawn from any well, are not introduced into the soil, groundwater system, or any well.

If introduction of non-approved substances or materials by **CONTRACTOR** into a well permanently impairs its usefulness, **CONTRACTOR** shall immediately, at its own expense: 1) abandon the well in a manner acceptable to **OWNER** and in accordance with state and county procedures; and 2) construct a new equivalent well at a location designated by **OWNER** near the abandoned well, to be completed in strict accordance with the terms and conditions of this Agreement and in accordance with instructions from **OWNER**.

In addition, **CONTRACTOR** shall not cause the release of any hazardous or nuisance substances to the environment and, if such release occurs, **CONTRACTOR** shall be responsible for all costs associated with remedial or corrective actions to mitigate the release. For example, **CONTRACTOR** shall maintain equipment to prevent leaks of fuel, lubricants, or hydraulic fluid and, if such leaks occur, shall remove and properly dispose affected soil and shall place and maintain appropriate containment to prevent further impacts. **CONTRACTOR** shall begin the project with appropriate containment in place for any equipment suspected or reasonably anticipated to cause such

leaks. Thread lubricant used on drill pipe couplings used for any drilling shall not contain volatile organic compounds.

S. PROTECTION OF THE SITE AND EQUIPMENT

CONTRACTOR shall provide necessary security for **CONTRACTOR's** equipment. **CONTRACTOR**, at its expense, shall protect all structures, roads, pipelines, etc., from damage by **CONTRACTOR** during the progress of its work.

CONTRACTOR shall adequately identify and guard hazardous areas, conditions, equipment, and chemicals by appropriate visual warning devices and, where necessary, physical barricades in accordance with applicable OSHA regulations. **CONTRACTOR** shall make adequate provisions for protection of the work area against fire, theft, and vandalism, and for protection of the public against exposure to injury. **CONTRACTOR** shall be responsible for securing, properly marking, and preventing injury to the public and to workers in and around all trenches, excavations, and other potentially hazardous conditions in accordance with OSHA recommendations and regulations. All necessary precautions shall be taken by **CONTRACTOR** to protect the public from injury due to operations in any public right-of-way.

Where **CONTRACTOR** operations could cause damage or inconvenience to telephone, television, power, oil, gas, water, sewer, or irrigation systems, **CONTRACTOR**, with the cooperation of **OWNER**, shall make all arrangements necessary for the protection of these utilities and services. **CONTRACTOR** shall be responsible for protection of utilities and services, and shall be solely responsible for any damages to utilities and services, if those damages result from actions of **CONTRACTOR**. **OWNER** shall not be responsible to **CONTRACTOR** for damages as a result of **CONTRACTOR's** failure to protect the well upon which the work is being performed and the utilities encountered in the work. In the event of interruption to domestic water, sewer, storm drain, or other utility services as a result of accidental damage due to operations, **CONTRACTOR** shall immediately notify the proper authority and **OWNER**. **CONTRACTOR** shall cooperate with said

authority in restoration of service as promptly as possible. Any facility that has been damaged beyond restoration by **CONTRACTOR** shall be replaced at **CONTRACTOR's** expense.

CONTRACTOR shall use plastic sheeting to protect the site from spills of hydraulic oil, fuel, lubricants, or coolants from the drilling and support equipment. Oil absorbent mats must be placed under and around all leaking engines; oil or other fluid spills must be cleaned to the satisfaction of the **OWNER**. In the event of a large leak or spill from equipment operated by **CONTRACTOR**, the **CONTRACTOR** shall be responsible for the excavation and proper disposal of any contaminated soil, and the restoration of the site to original grade with clean topsoil, if applicable.

CONTRACTOR shall maintain a clean, safe, accessible site. **CONTRACTOR** shall remove from the well site and storage area all debris and unused materials. Trash shall be picked up daily and properly stored in garbage cans or dedicated roll-off garbage bins. Burning or burying of unused materials or trash on site will not be allowed. **CONTRACTOR** shall provide a portable toilet at the site during all drilling, construction, development, and/or testing operations. **CONTRACTOR** shall take precautions to minimize damage to the site during **CONTRACTOR** operations. Upon completion of the work, **CONTRACTOR** shall restore the site as nearly as possible to its original grade and condition.

Drums and packages of any chemicals or other substances used by **CONTRACTOR** in the course of work shall be stored properly and shall not create a nuisance; any releases or nuisances and their impacts shall be mitigated by **CONTRACTOR** at its expense.

T. PAYMENT

If invoices do not require adjustment, invoices shall be paid within thirty (30) days from the time invoices are received. In the event that charges contained in an invoice are disputed, **CONTRACTOR** shall be notified in writing within fifteen (15) days of receipt of the invoice. If the parties are unable to resolve the dispute within thirty (30) days after **CONTRACTOR** is notified of

the dispute, the parties may elect to attempt to resolve the dispute through a three-person mediation committee, which shall consist of one representative from each party and one person acceptable to both parties. Interest shall not accrue on any disputed amount. **OWNER** and **CONTRACTOR** shall each pay their respective costs of mediation or dispute resolution under this Agreement.

U. CHANGE ORDERS

OWNER shall, after consultation with **CONTRACTOR**, have the right, for any reason and at any time, to: 1) change the services of the Technical Specifications; 2) request **CONTRACTOR** to perform additional tasks; and/or 3) change the scope or the time of completion of the additional services (if any); provided that, if **OWNER** and **CONTRACTOR** are unable to agree on changes in the time of completion of, and/or cost for additional services, this Agreement may be terminated. All changes in services (all herein referred to as "Change Order") shall be in writing and signed by **OWNER** and **CONTRACTOR**, provided, however, that in the event of an emergency, such changes may be made by verbal communication and subsequently set forth in a written Change Order.

V. WAIVER

Any failure of **OWNER** to insist on the strict performance of any provision of this Agreement by **CONTRACTOR**, or failure to enforce or take action with regard to any breach by **CONTRACTOR** shall not be deemed to be a waiver of such provision or breach, or any other provision or breach of this Agreement. No waiver of any provision of this Agreement shall be held to be a waiver of any other provision hereof, nor constitute a continuing waiver.

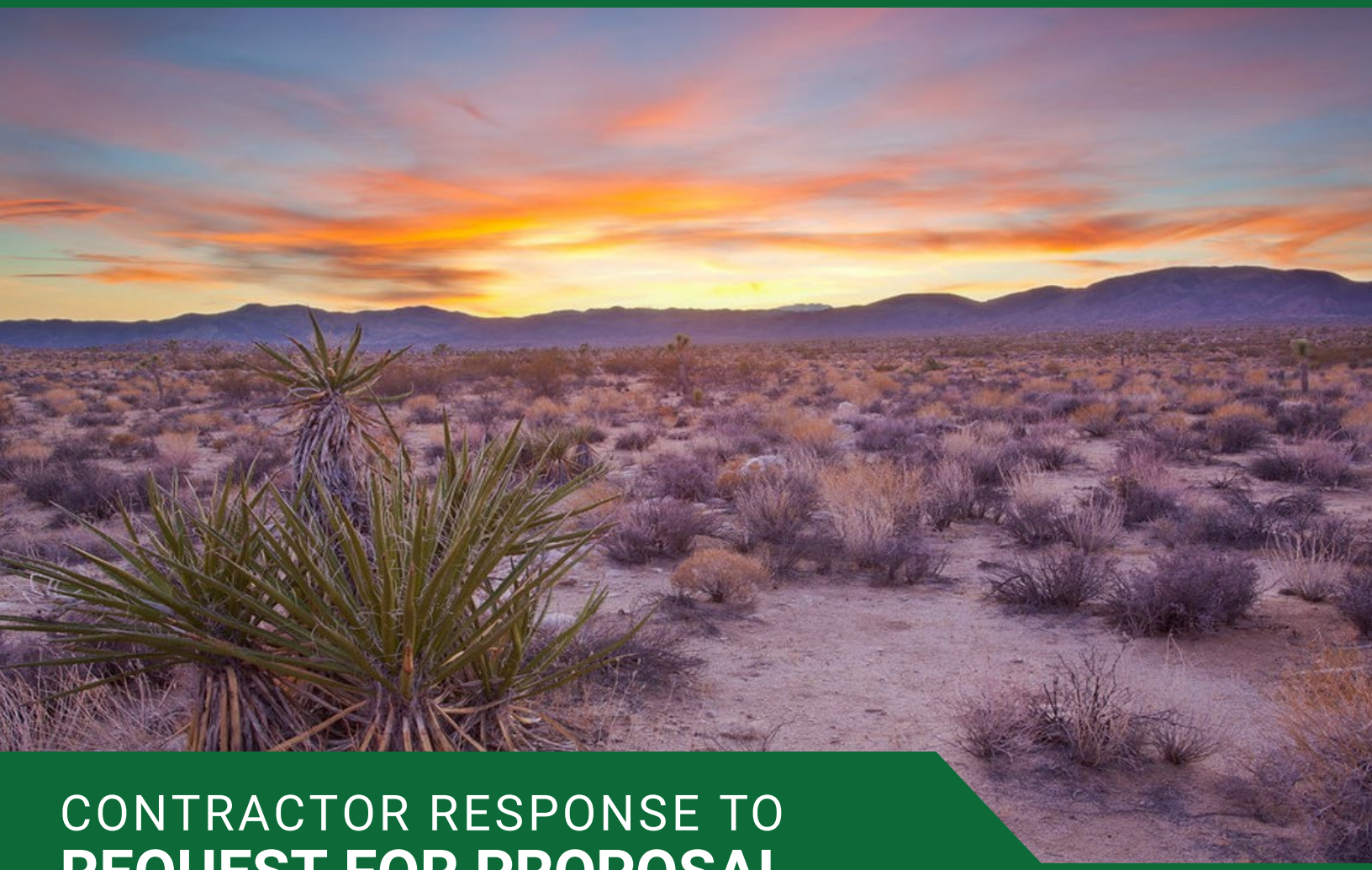
IV. STATEMENT OF QUALIFICATIONS

The **CONTRACTOR** will be responsible for submitting a statement of qualifications along with their proposal. The qualification package will include a list of a minimum of ten (10) municipal wells drilled in the past two (2) years. Each well must include the agency, contact person, phone number, start date, completion date and dollar amount.

The LSTW process shall be conducted by a **CONTRACTOR** licensed in the State of California to perform this process. **CONTRACTOR** shall provide proof with bid of how they intend to perform the Dynamic Flow and Chemistry Well Profiling portion of the work utilizing a dye tracer system as described in Section 1.1. **CONTRACTOR** shall provide a list of in house and subcontractor technical support personnel.

Personnel involved in the Dynamic Flow and Chemistry Well shall demonstrate proper knowledge of the work required, shall have performed at least 100 profiles and mass balance reports in the equipment utilized. **CONTRACTOR** shall provide proof with bid of experience requirements.

Layne®
A GRANITE COMPANY



CONTRACTOR RESPONSE TO
REQUEST FOR PROPOSAL

SAN ANTONIO WATER COMPANY

Long Screen Test Well

Drilling, Installation, and Testing of (1) Long Screen Test Well

February 21st, 2022

Brian Lee
General Manager
San Antonio Water Company
139 N. Euclid Ave
Upland, CA 91786

Re: **Long Screen Test Well**
Drilling, Installation, and Testing of (1) Long Screen Test Well

Thank you for considering Layne Christensen Company as a candidate for the Long Screen Test Well project. We are excited about the opportunity to provide San Antonio Water Company with the background and evidence to prove why Layne Christensen Company is the partner of choice for this great project.

Our team members have had the pleasure of working with the San Antonio Water Company team in the past and appreciate the opportunity to provide our services on this upcoming project. This is an opportunity that our team does not take lightly. Throughout this proposal we have worked diligently to prove not only our experience as a company for this project, but also, and most importantly, our experience as a team and a reputable group of extraordinary professionals.

Through our prior experience we hope that we have been able to prove to you that we are the team that you can trust. Through every step of the way, our group of industry-leading professionals will provide transparency and partnership so that your team will always feel that they are receiving the best cost, quality, schedule, and safety for your construction dollar. Through our project experience you can rest assured that our staff will always utilize the best practices of the industry to ensure a quality project is being delivered with a best value approach every step of the way.

The Layne Christensen Company team appreciates the opportunity to expand on our qualifications to San Antonio Water Company, and we look forward to further discussing the experience and value we can bring to your project.

Sincerely,

Ricky Trujillo

Account Manager
Water Resources Division
Ricky.Trujillo@gcinc.com

Timothy Oman

Division Business Development Manager
Water Resources Division
Timothy.Oman@gcinc.com

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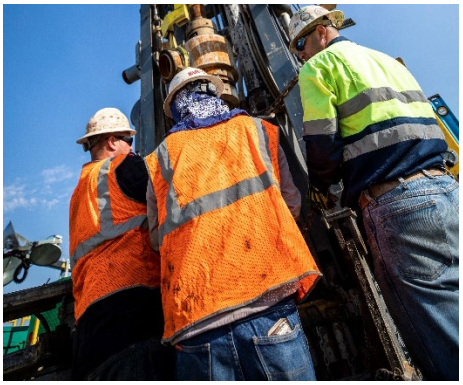
Section 01 | General Company Information



Established in 1882, Layne offers a rich history of delivering safe, professional, and reliable water solutions throughout North America.

Layne began as a domestic water-well drilling company in South Dakota. From those humble roots Layne has evolved into a national water and minerals solutions provider serving both public and private sectors. In June 2018, Layne became a wholly owned subsidiary of Granite Construction, Inc. Layne is headquartered in the Woodlands, Texas and has 24 offices from upstate New York to Southern California.

Water users look to Layne when they are seeking a trusted partner that will consistently deliver projects safely, on time, on budget, and as promised. Layne's full circle of water solutions provide clients a single point of accountability for even the most complex projects. With 138 years of experience, Layne has earned a reputation for minimizing risk while maximizing peace of mind through operational excellence and client satisfaction.

The water resources division is the national leader in water wells. Layne has drilled nearly 1,000 wells in the past 5 years alone, with a combined pumping capacity of 1 billion gallons per day. In Layne's 130+ year history, we have successfully completed more than 50,000 water wells. As a trusted partner in pump design and maintenance services, our team provides capabilities to optimize our customers pump assets. Our team is largely comprised of veteran employees providing exceptional service that renders success to each client by increasing production, improving efficiency, and reducing cost.

Layne is uniquely qualified to safely complete the work under this contact per the required expectations of San Antonio Water Company.

Corporate Resources

LANYE, A GRANITE COMPANY

GRANITE IS AMERICA'S INFRASTRUCTURE COMPANY™

Granite Construction Incorporated offers a national workforce of 7,200 and a combined revenue of $3.6 billion annually. As an industry leader in the transportation, water resources and mineral exploration markets throughout North America, Granite provides infrastructure solutions for construction, program management, alternative procurement, and is a vertically integrated contractor with aggregate materials reserves throughout the U.S.

RECENT ACCOLADES:

- 2019, Named to World's Most Ethical Companies List for ten consecutive years
- 2018, Forbes Magazine, one of America's Best Mid-Size Employers
- 2018, Engineering News Record (ENR) Magazine Top 400 Contractors List - Ranked #24
- 2018, ENR Sourcebook, #1 Highways, #5 Mining, #6 Solar, #7 Bridges, #10 Dams/Reservoirs, #16 Airports, #17 Mass Transit/ Rail, #21 Power

SAFETY BY CHOICE

The protection of our employees, the public and the environment is at the core of everything we do. Safety is more than a business commitment—it's our moral obligation.

MARKETS

Granite specializes in complex infrastructure projects for transportation, industrial and specialty markets.

SERVICES

General Contracting, Construction Management, Design-Build, CMAR, CM/GC, Pavement Preservation, Disaster & Emergency Response, and Construction Materials Testing.

NATIONAL WORKFORCE

7,200 employees

HEADQUARTERS

Established in 1922, Corporate Headquarters located on 585 West Beach St., Watsonville, CA 95076. Phone (831)724-1011

STOCK MARKET/TRADING SYMBOL

New York Stock Exchange (NYSE: GVA) and is part of the S&P MidCap 400 Index, the MSCI KLD 400 Social Index and the Russell 2000 Index.

OFFICE LOCATIONS

Granite and its subsidiaries operate over 75 office locations throughout the United States, Canada, Mexico, and South America.

EQUIPMENT FLEET

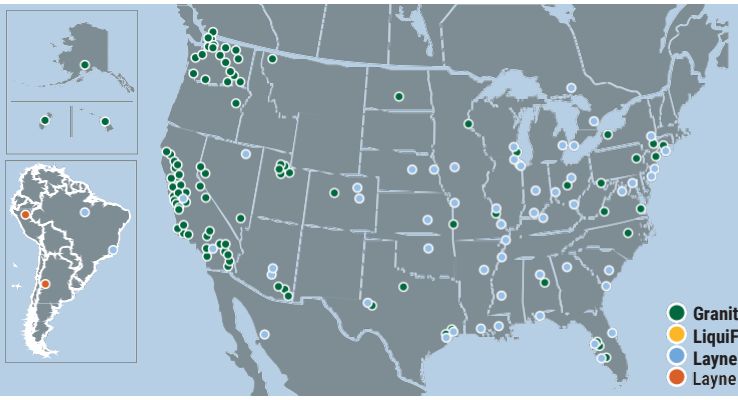
Granite's equipment fleet exceeds $650 Million and includes more than 1,500 pieces of heavy equipment and 3,500 trucks, trailers, and vehicles.

CONSTRUCTION MATERIALS

Granite operates 50 aggregate facilities throughout the west, producing specialty agregates, sand/gravel, and asphalt concrete.

ANNUAL REVENUE & BONDING CAPACITY

$3.4 billion annual revenue
$5 billion aggregate bonding capacity



LAYNE CORPORATE COMMITMENT

Layne's senior management teams support the effort to secure and complete this project work. Senior management has provided its support in committing company-wide resources to successfully complete this project.

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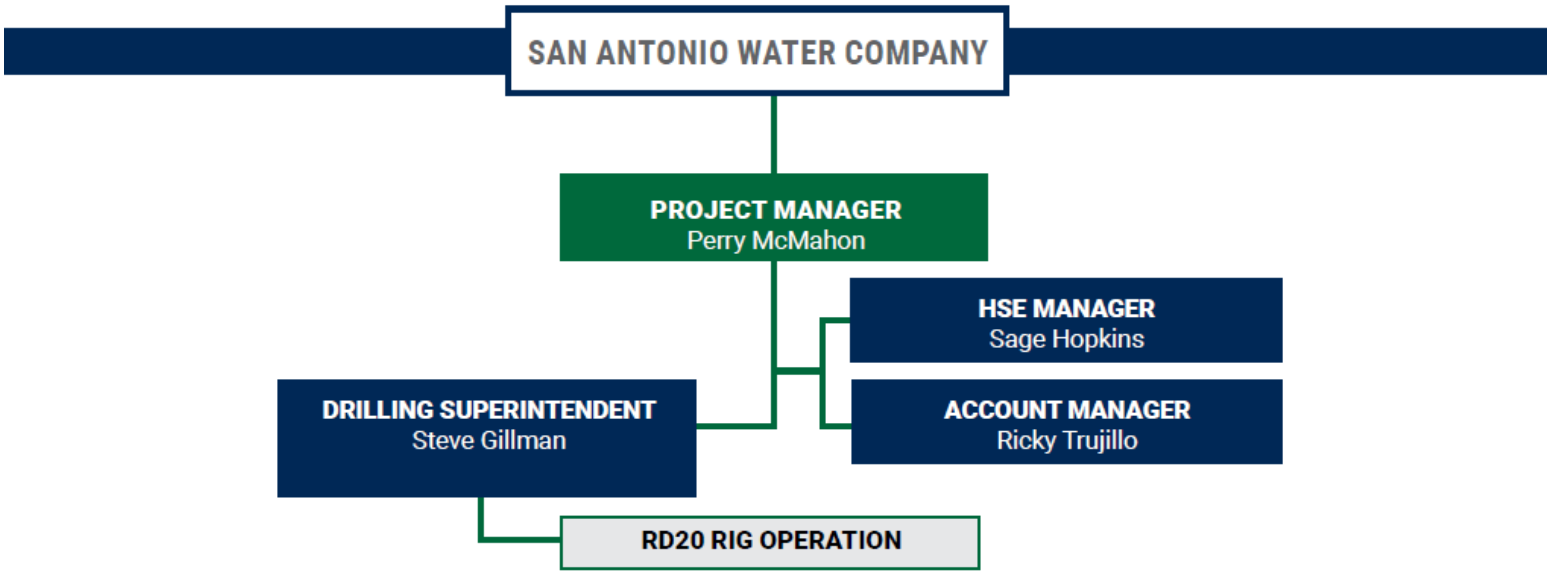
Section 02 | Proposed Management Personnel



Resumes for all key personnel will be provided upon request

Section 03 | Proposed Project Implementation

Management Plan and Strategy

The foundation of Layne's project execution is open, honest, and daily communication. Our Operator, Project Manager, and Operations Manager communicate daily. Layne's field crews are provided with a detailed job letter that explains the entire scope of work, completion schedule, major material items deliveries, and the use of subcontractors required to successfully carry out the timely completion of our work.

Our operator will communicate daily with your field representative the status of the work and discuss critical path items that will need coordination between our two companies. Our project manager and field operations manager will communicate with your office project manager frequently to ensure project objectives are being completed as specified.

Our pre-mobilization activities will consist of the following:

- Project scheduling and material ordering will commence once the written contract for the project is executed.
- Utility locates will be initiated as required.
- Obtain any required work permits.
- Ensure field crews have proper training
- Ensure all field equipment has been inspected and readied for field work
- Project submittals will be provided as required. Provide SDS for all chemical products brought onto the site.
- Layne will develop the field performance plan, site-specific health and safety plan, quality assurance/quality control plan and activity hazard analysis.
- A pre-mobilization conference will be completed in advance of mobilization to confirm and verify project completion parameters.
- Following the pre-mobilization conference, Layne will mobilize our equipment, tooling, personnel, and materials to the job site.

Once fieldwork begins, Layne will perform the following items:

- Daily equipment inspections
- Daily tailgate safety meetings before the beginning of each work shift
- Daily communication with the on-site field representative
- Daily field report completed and signed by the on-site field representative
- Daily review of qa/qc compliance with all field efforts
- Daily "look ahead" of upcoming work and complete pre-planning objectives
- Our on-site field project manager will attend all meetings as require

There will be occasions when our plans and procedures will have to be modified to meet unanticipated conditions, weather conditions, or other unforeseen external factors. These changes will be documented and discussed with your firm as required.

Project Scope

Scope of work includes the following:

Mobilization/Demobilization of RD20 drill rig and support equipment

Installation of a 36 inch conductor casing to 50 ft. below ground surface

Drilling of 14 ¾ inch flooded reverse circulation test hole to a depth of 1,200 ft. below ground surface

Optional Item (If needed, not included in current bid total) – Installation of 24 inch conductor casing up to 300 ft

Geophysical Logging

Wiper run to clean out borehole

Installation of 6 inch fiberglass blank (600 ft) and screen (600 ft)

Installation of gravel pack to surface from 1200 ft with (4) 15 ft bentonite seals and 5 ft sand transitions

Disposal of drilling fluids off site up to 13,500 gallons

Rental of 3 21,000 gallon settling tanks for up to 60 days

20 hours of initial airlift development with PFD

Mobilization/Demobilization of pump rig and support equipment

Installation/Removal of packer and 4” submersible pump

Securing well head and cleanup of site

Besst profiling, workplan, site management, and report preparation

Section 04 | Work Schedule

Project Schedule

With our current backlog we would anticipate a start date in June 2022 and would anticipate a timeline of roughly 50 days to complete the proposed scope of work. This is subject to the penetration rate encountered which could impact or improve the days estimated for completion.

Please note: Schedule is tentative to availability at the time notice to proceed is issued.

Section 05 | Safety, Health, and Environmental Plan

Contractors Health, Safety, and Environmental Standards, Policies, and Procedures

Layne considers safety as our number one priority on this project. Layne safety performance standards meet and often exceed compliance with federal, state, and local laws and regulations. As a result of this culture, Layne's safety record has outpaced industry averages because we know that safer employees, contractors, and work environments result in more effective operations. Layne believes that all accidents are preventable, so we continue to work towards the goal of 100% safe working hours.

Layne 's employee commitment to HSE is as stated below:

- I will take ownership of safety for myself and those around me.
- I will respect the communities I work in and always be a role model for safe behavior.
- I will assess the risks involved in every task before I begin.
- I will properly inspect, maintain, and operate all vehicles, tools, and equipment.
- I will exercise STOP WORK where I perceive a situation to be unsafe or otherwise have concerns about safety.

At Layne, we have the following expectations of each other:

- We expect that every employee is committed to ZERO incident operations and performing work safely or not at all.
- We expect that employees will follow and hold your co-workers accountable for following all of our safety policies and wearing/using all of the required PPE.
- We expect that employees will report all incidents (injury, illness, property damage, environmental or vehicle) so that we can ensure that we do a thorough incident investigation and prevent reoccurrence.
- We expect that employees will not text and drive and use a hands-free device when talking on a cell phone.
- We expect that employees will do a JSA before each task (at a minimum once per shift for each task)
- We expect that employees will operate and maintain all vehicles, tools, and equipment as if it were your own
- We expect that .if an employee see something that does not look or feel right, they will say something.

To carry out a safe work environment, Layne will implement the following improvement cycle:

1. **Plan**: Plan the work so that all crew members are protected and know what needs to be done.
   - Participate and follow the daily Take 5 plan
   - Be active in protecting oneself, others, the public and the environment
   - Participate in safety processes
   - Stop and ask for guidance if you do not understand or have any doubts about a how to do something
   - Set a plan in motion and stick to the plan
   - Follow safe work practices
   - Don't deviate from your supervisors Take 5 without approval and a new plan
   - Assess hazards continuously throughout the shift
   - Maintain good housekeeping and organization
   - Request training or guidance
   - Report Near Misses
   - Set a good example
2. **Check**: Make sure the plan is the right plan
   - Conduct observations and planned inspections
   - Speak up when an unsafe act or condition is noticed
   - Don't walk by something that is wrong
   - Evaluate the tasks recorded in the Take 5 and note any confusion or additional direction needed
   - Ask for feedback from the crew
3. **Adjust**: Use the information you get from checking. Continue the same path or adjust the plan.
   - Employees notify your supervisor of unsafe work conditions that exist OR that you THINK might exist so the plan can be adjusted
   - Supervisors use your observations and inspections to improve the plan

If required, Layne's HSE department can deliver in-house safety training to any team member requiring it that covers all phases of the health and safety field and it is compliant with the most up-to-date OSHA, MSHA, and DOT regulations.

On the job site, all Layne field employees will possess the necessary personal protective equipment and detailed, site-specific safety information that covers issues including confined space entry, blow out preventers, environmental health and safety plans, and on-site monitoring. Every Layne field employee has Stop Work Authority because every employee is responsible for safety. Layne has a comprehensive, industry-leading health and safety program, which can be viewed at www.graniteconstruction.com/company/safety-choice. All Layne field employees have access to this data in the development and implementation of site-specific health and safety plans.

Our safety program is composed of, but not limited to, the following:

- Supervisor's Accident Prevention Manual
- Safety Practices Manual
- Hazard Communication Manual
- Fleet Manual
- Emergency Response Plans
- Site Specific Health and Safety Plan Auditing Forms
- Procedures Mentoring Program

All Layne field employees tasked with project execution have OSHA construction site training (forklifts, backhoes, manlifts, and cranes). Most of the Layne field employees have Red Cross First Aid and CPR training. As required, training compliance documentation can be provided prior to project mobilization.

Our standard personal protective equipment for each field employee is as follows: hard hats per ANSI Z89.1-1997, safety glasses with side protection per ANSI Z87.1-1989, steel toed boots per ASTM F2413-11, high visibility vest or shirt per ANSI/ISEA 107-2010, hearing protection and appropriate work gloves. While working in a high dust environment, employees are required to wear dust masks. All company vehicles come equipped with a working-Class A/B/C fire extinguisher, first aid kits, and have current proof of insurance and vehicle registration.

Layne is committed to working diligently and safely on this project. A site-specific health and safety plan will be prepared and administered while on site. Layne will practice a behavioral-based safety program that utilizes a hazard identification risk assessment. Each work shift will begin with a tailgate safety meeting. The crew will review the expected field operations each day and determine what the potential risks are in performing that work. The crew will then review and implement safe work practices to eliminate and/or reduce the risk of a safety incident. All our crews are expected to work in the "green" (safe) zone and to not take any risks with respect to performing their work. All field employees and site visitors have the ability to stop work if they feel there is a safety risk associated with performing the work.

Layne's field crews will be supported by Layne's corporate health and safety program should the need arise. As needed, Layne can provide a regional health and safety coordinator on site for portions of this project to review and ensure safety compliance.

Contractors Health, Safety, and Environmental Records

3 year history (2019-2021)

Layne Christensen Company	2019	2020	2021
Man Hours	1,852,578	1,311,210	1,505,647
Days: Lost Time	191	241	0
Days: Restricted Duty	183	214	360
Deaths	0	0	1
Lost Time Cases	2	4	0
Restricted Cases	6	1	5
Medical Cases (Other Recordable Cases)	4	5	3
Total OSHA Recordable Cases	12	10	9
OSHA Recordable Incident Rate	1.30	1.53	1.20
Lost Time Incident Rate	0.22	0.61	0.00
Average Number of Employees	890	630	724
DART RATE (Days Away Restricted Time)	0.9	0.76	0.66

LAYNE, A GRANITE COMPANY
5810 East 77th Avenue, Commerce City, CO 80022
Phone: (303) 755-1281 + Fax: (303) 755-1236

RIG SPECIFICATION SHEET: ATLAS COPCO RD20-III

RIG MOUNTING:
Heavy duty 5-axle crane carrier with 281-inch wheelbase, 90,000 lb. GVWR, Full power Tridem rear axles

RIG POWER:
Caterpillar C13 380 HP diesel engine
Fuller RTO-14908LL transmission: 10 speeds forward, 3 speeds reverse

RIG DECK POWER:
Deck mounted Cummins QSK-19C, 755 HP diesel engine w/ silencer muffler
2 fuel tanks-335 gallons total fuel storage

AIR COMPRESSOR:
Ingersoll-Rand air compressor, 1,250 CFM x 120 PSI to 350 PSI

DERRICK:
Dimensions 61'-11-1/2" Length x 48-1/2" Wide x 41" Deep
51'-7" feet vertical working space between spindle-table
Pull back: 120,000 lbs. - Pull down: 30,000 lbs.

TOP HEAD TRAVEL SPEED AND PERFORMANCE:
Drill feed rate: 29 feet per minute
Fast feed up (regen. on): 106 ft. /min; Fast feed up (regen. off): 72 ft. / min
Fast feed down: 180 feet per minute
Head rotation speed 0 to 120 RPM
Drilling torque 8,000 ft-lb @ 120 RPM, floating spindle

MAIN HOIST AND JIB BOOM: 7,500 LB., HYD POWERED CASING
hoist winch-operating line speed up to 225 ft./min
4,000 lb. Hydraulic jib hoist and boom-operating line speed up to 106 ft./min

CONTROL PANEL:
Hydraulic control panel with aluminum protective cover

HYDRAULIC LEVELING JACKS:
4-1/4" front stabilization jack – one (1) 48" stroke
4-1/4" front main leveling jacks – two (2) 48" stroke
5" rear main leveling jacks – two (2) 48" stroke

RIG TRAVEL DIMENSIONS:
Overall height (derrick up position) = 62'- 6";
Overall height (derrick down position) = 13'- 10"
Overall width = 8'- 4"; overall weight dry (approx.) = 88,000 lbs.

DRILLING CAPABILITIES:
Conventional air/mud rotary, dual tube rotary (4.5", 5.5", 7"), flooded reverse, casing advance, spot coring

MISCELLANEOUS ITEMS:
3" mud manifold with hydraulic valve; 3" air booster piping up to 1,500 PSI with auxiliary and booster compressor connections; single rod loader with a loader pod for 5-1/2" drill collars; 35 GPM water injection pump; 60 gallon DHD oiler; tattle-tale head indicator; dual tube reverse air rotary drilling tools available; automatic rod handler

Specification will vary by specific drilling rig unit number

Section 07 | Cost Estimate

Bid Item	Description	Bid Quantity	Unit	Bid Price	Bid Total
1	36-IN CONDUCTOR & SEAL	50	LF	1,175.00	58,750.00
2	MOB & RIG UP RD20	1	LS	179,874.00	179,874.00
3	14-3/4-IN FLOODED RC TEST HOLE TO 1,200-FT	1,150	LF	126.00	144,900.00
4	GEOPHYSICAL LOGGING	1	LS	14,190.00	14,190.00
5	24-IN CONDUCTOR CASING (IF NEEDED; NOT INCLUDED)	300	LF	575.00	
6	CLEANOUT BOREHOLE TO 1,200-FT	30	HR	660.00	19,800.00
7	F&I 6-IN FIBERGALSS BLANK	600	LF	118.00	70,800.00
8	F&I 6-IN FIBERGLASS SCREEN	600	LF	133.00	79,800.00
9	F&I GRAVEL FILTER PACK	1,120	LF	28.00	31,360.00
10	15-FT INT BENTONITE SEALS & 5-FT SAND TRANSITIONS	4	EA	2,430.00	9,720.00
11	PROFILE, TRANSPORT, DISPOSE OF DRILLING FLUIDS	13,500	GAL	1.74	23,490.00
12	3-EA 21K-GAL SETTLING TANKS	60	DY	234.00	14,040.00
13	INITIAL AIRLIFT DEVELOPMENT W/ PFD	20	HR	1,015.00	20,300.00
14	RIG DOWN AND DEMOBILIZE	1	LS	179,874.00	179,874.00
15	MOBILIZE PUMP RIG & CREW	1	LS	7,580.00	7,580.00
16	F&I PACKER AND 4-IN SUB PUMP	1,200	LF	35.00	42,000.00
17	BESST DYE INJECTION AND TRACING	1	LS	73,333.00	73,333.00
18	BESST WORKPLAN AND SITE MANAGEMENT	1	LS	86,666.00	86,666.00
19	BESST REPORT PREP	1	LS	13,334.00	13,334.00
20	PACKER PUMP TESTING & SAMPLING	80	HR	490.00	39,200.00
21	REMOVE PACKER AND 4-IN SUB PUMP	600	LF	24.00	14,400.00
22	SECURE WELL HEAD, CLEANUP, DEMOB	1	LS	7,580.00	7,580.00
	TOTALS				**1,130,991.00**

Section 08 | Certificate of Insurance

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 09/21/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER LIC #0C36861 1-415-403-1491 Alliant Insurance Services, Inc. 100 Pine Street, 11th Floor San Francisco, CA 94111	CONTACT NAME: Kimberly Leikam PHONE (A/C, No, Ext): 415-403-1491 FAX (A/C, No): 415-874-4818 E-MAIL ADDRESS: kleikam@alliant.com
INSURED Layne Christensen Company 585 West Beach Street Watsonville, CA 95076	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : VALLEY FORGE INS CO — 20508 INSURER B : CONTINENTAL CAS CO — 20443 INSURER C : TRANSPORTATION INS CO — 20494 INSURER D : AGCS MARINE INS CO — 22837 INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** 63270912 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT X LOC OTHER:			GL2074978689	10/01/20	10/01/23	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 2,000,000 $ 2,000,000 $ Nil $ 2,000,000 $ 10,000,000 $ 2,000,000
A	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY / SCHEDULED AUTOS X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY			BUA2074978692	10/01/20	10/01/23	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 2,000,000 $ $ $
B	X UMBRELLA LIAB X OCCUR X EXCESS LIAB CLAIMS-MADE DED RETENTION $			CUE2068209453	10/01/21	10/01/22	EACH OCCURRENCE AGGREGATE	$ 8,000,000 $ 8,000,000
A C A C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		WC274978630 (CA) WC274978658 (NY) WC274978644 (AOS/StopGap) WC274978661 (MT,WI,HI)	10/01/21 10/01/21 10/01/21 10/01/21	10/01/22 10/01/22 10/01/22 10/01/22	X PER STATUTE / OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 2,000,000 $ 2,000,000 $ 2,000,000
D	Owned, Leased/Rented Eqpt			MXI93059745	07/01/20	07/01/22	Limit Per Occurrence	2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

EVIDENCE OF INSURANCE FOR BIDDING, PRE-QUALIFICATION AND COMPLIANCE PURPOSES GL Per ISO Form CG0001 10/01; AL Per ISO Form CA0001 10/13

CERTIFICATE HOLDER	CANCELLATION
5553 FOR INFORMATION ONLY 585 West Beach Street Watsonville, CA 95076 USA	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE

ACORD 25 (2016/03) The ACORD name and logo are registered marks of ACORD

kaleikam
63270912

SUPPLEMENT TO CERTIFICATE OF INSURANCE	DATE 09/21/2021

NAME OF INSURED: Layne Christensen Company

The named insured reserves its rights to provide any additional coverages under the policies above to only those expressly negotiated for by contract.

SUPP (10/00)

Section 09 | Contractor's License Copy

dca
DEPARTMENT OF CONSUMER AFFAIRS

CONTRACTORS
STATE LICENSE BOARD
ACTIVE LICENSE

License Number 510011 Entity CORP

Business Name LAYNE CHRISTENSEN COMPANY

Classification(s) A C57 C61/D09 C10 C61/D21

Expiration Date 05/31/2023 www.cslb.ca.gov

Section 10 | Clarifications

1. This proposal is subject to mutual agreement on the contract terms and conditions. Layne Standard Terms and Conditions Attached.
2. Applicable Taxes are included
3. Bonds are not required
4. Prevailing Wage Rates are not required or included
5. Sound walls and noise mitigation are not included
6. Contractor will operate on a 24 hours per day, 7 days per week schedule as necessary
7. Client provides adequate ingress and egress to each site for all equipment needed
8. Client provides approximately 120-ft x 120-ft clear and level drill pads for each site
9. Client provides adequate and legal locations for discharging all drill cuttings and well development/testing fluid within 300ft of the well site.
    a. Offsite drilling fluids disposal is included
    b. 3-ea 21K-gal tanks are included to settle solids of well development testing fluid
    c. No discharge treatment beyond this is included, any turbidity/TSS/TDS/etc. limitations are the responsibility of the Client and additional onsite Contractor time is subject to a standby rate of $240/hr
10. Client provides constant 200-gpm minimum water supply (meter and backflow prevention if needed) within 300-ft of the drill site
11. Lost Circulation clause applies:
    a. In the event subsurface and/or geologic conditions affect a lost of circulation and/or an adequate fluid level in the borehole cannot be maintained for at least two consecutive hours, the client will be notified, and drilling operations will revert to contractor's hourly rate of $640/hr and material at cost plus 15% mark-up. When circulation is resumed and maintained for at least two consecutive hours, the drilling operation will revert to the footage rate
12. Hard formation/Slow Penetration clause applies:
    a. In the event subsurface and/or geologic conditions slow the drilling rate below six feet per hour for at least two consecutive hours, the client will be notified, and drilling operations will revert to contractor's hourly rate of $640/hr. If the drilling rate moves above six feet per hour and maintained for at least two consecutive hours, the drilling operation will revert to the footage rate
13. Geophysical Logging will be performed by Pacific Surveys and is limited to the following logs:
    a. E-log
        i. Long and short normal, SP, and SRP
    b. Gamma
14. This quote is valid for 30 days
15. Final site restoration or grading are NOT included
    a. Client is responsible for final restoration (if needed) of the project site post Contractor's demobilization
16. Test well abandonment and the construction of a production well will be quoted separately.

TERMS AND CONDITIONS

LIABILITY OF CONTRACTOR: *Contractor shall not be liable for any bodily injury, death, or injury to or destruction of tangible property except as the same may have been caused by the negligence of Contractor, in no event shall Contractor belable for any delays or special, indirect, incidental or consequential damages. Purchaser agrees that the total limit of Contractor's liability (whether based on negligence, warranty, strict liability or otherwise) hereunder, shall not exceed the aggregate amount due Contractor for services rendered under this contract. All claims, including claims for negligence or any other cause whatsoever, shall be deemed waived unless made in writing and received by Contractor within one (1) year after Contractor's completion of work hereunder.*

INSURANCE: Contractor shall provide workers' compensation insurance, public liability and property damage insurance covering its employees and operation. Purchaser, at its option, may maintain such insurance as will protect it against claims arising out of the work.

REIMBURSABLE COST: In addition to the hourly charge provided on the face of this contract, Purchaser will reimburse Contractor for travel and living expenses necessarily incurred by the Contractor in the performance of the work, minor incidental expenses such as overnight mail, telephone and petty cash expenditures necessarily incurred, cost of removal of all debris if so directed by Purchaser, sales, consumer, use and similar taxes required by law and the cost of permits and all licenses necessary for the execution of the work. The foregoing costs shall be billed at actual cost plus fifteen percent (15%) unless otherwise agreed upon.

PRICE ADJUSTMENT: Any cost estimates or time frames stated herein are subject to equitable adjustment in the event of differing or unforeseeable conditions, changes in applicable laws after the date of this contract, unforeseeable delays or difficulties caused by acts of God, Purchaser or any third parties. Prices of goods acquired by Contractor from others shall be adjusted to reflect Contractor's price in effect at time of shipment. The price of Contractor's goods will be adjusted to the price in effect at time of shipment in accordance with Contractor's current escalation policies or as specifically covered in this contract.

TERMS: Thirty (30) days net from date of invoice. For extended projects, Contractor shall submit invoices on a monthly basis for any and all work completed and materials or equipment provided during the previous month. Past due invoices shall be subject to a delinquency charge of one and one-half percent (1-1/2%) per month (eighteen percent (18%) per annum) unless a lower charge is required under applicable law, in which case the lower rate shall apply. Purchaser agrees to pay all collection fees, attorneys' fees and costs incurred in the collection of any past due amounts arising out of this contract. Contractor shall have the right to immediately terminate this contract without further liability if Purchaser fails to make timely payment or otherwise materially breaches this contract.

MATERIAL SHORTAGES AND COST INCREASES: If any portion of materials or equipment which Contractor is required to furnish becomes unavailable, either temporarily or permanently, through causes beyond the control and without the fault of Contractor, then in the case of temporary unavailability any completion time frames shall be extended for such period of time as Contractor shall be delayed by such above-described unavailability, and in the case of permanent unavailability Contractor shall be excused from the requirement of furnishing such materials or equipment. Purchaser agrees to pay Contractor any increase in cost between the cost of the materials or equipment which have become permanently unavailable and the cost of the closest substitute which is then reasonably available.

DELAYS: If Contractor is delayed at any time in the progress of work by labor disputes, fire, unusual delays in transportation, unavoidable casualties, weather, or any cause beyond Contractor's reasonable control, then any completion time frames shall be extended by a reasonable period of time, at least equal to the period of delay.

CHANGED CONDITIONS: The discovery of any hazardous waste, substances, pollutants, contaminants, underground obstructions or utilities on or in the job site which were not brought to the attention of Contractor prior to the date of this contract will constitute a materially different site condition entitling Contractor, at its sole discretion to immediately terminate this contract without further liability.

ESCALATION: This contract is made with the understanding that Contractor will be able to begin and continuously proceed with its work on or before the proposed start date on the reverse side hereof. In the event Contractor is unable to commence its work on or before said date because the project is not ready for Contractor's work, Contractor will charge Purchaser the amount of increase in Contractor's cost attributable to such delay, plus C

ontractor's normal overhead percentage.

GUARANTEE AND LIABILITY: Contractor warrants that its labor supplied hereunder shall be free from def ect and shall conform to the standard of care in effect in its industry at the time of performance of such labor f or a period of twelve (12) months after substantial completion of Contractor's work. Contractor agrees, to the extent it is permitted, to pass on any warranties provided by the manufacturers of materials and/or equipment furnished under this contract. Contractor itself provides no warranty, express, implied or otherwise, on any such materials or equipment. Contractor will not be responsible for: work done, material or equipment furnished or repairs or alterations made by others.

For any breach hereunder, Contractor shall be liable only for the value of the installation work or, if it wrongf ully fails to install, then its liability is limited to the difference between the contract price herein, and the v alue of other similar installation work. If Contractor's breach damages any materials or equipment furnished hereunder, Contractor shall only be liable for the value of such materials or equipment. Under no circumst ances will Contractor be liable for consequential, special or indirect damages, including without limitation, any crop loss or damage, damage to other equipment, structures or property, nor for any other similar or dissimi lar damages or losses whether due to delay, f ailure to furnish or install, delay in installation, defective material or equipment, defective workmanship, defective installation, delay in replacing, nor for any cause or breach w hat soever. In any event, Contractor's total liability towards Purchaser for alleged faulty performance or nonperformanc e under this contract shall be limited to the total contract price. No materials, equipment or services contracted herein carries any guarantee not mentioned in this contract. THE ABOVE WARRANTY IS IN LIEU OF ALL OT HER W ARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED.

TITLE AND OWNERSHIP: In case of default on Purchaser's part, Contractor shall have the right to enter t he premises upon which any material or equipment furnished herein have been installed and retake such goods not then paid for and pursue any further remedy provided by law, including recovery of attorneys' fees and any deficiency to the maximum extent and in the manner provided by law. Such materials and equipment shall r etain their character as personal property of Contractor until payment in full is received by Contractor, regardles s of their mode of attachment. Unless prior specific written instructions are received to the contrary, surpl us and replaced materials and equipmentresulting from repair or installation work shall become the property of Contractor.

DELIVERY: Shipment schedules and dates, expressed or implied, are contingent on normal conditions. C ontractor will not be responsible for any delays in shipment orcompletion caused by factors beyond its contr ol such as, but not limited to, suppliers' failures, accidents, work stoppages or operation of or changes in the l aw. Shipments will be made as promptly as Contractor's ability to obtain materials and/or equipment and sche duling will permit. No delay in shipments or variances from shipping schedule shall be cause of cancellation or any claim for damage. Any changes in layout or design requested after acceptance of this contract will be made at Purchaser's additional cost. Any such change and/or time taken to supply engineering data or to appr ove drawings will automatically extend shipping schedules. Equipment will be shipped "knocked down" to the extent Contractor considers necessary, with small parts stripped from equipment and crated. On and after d elivery to the carrier for transportation to the Purchaser's site, Purchaser shall be responsible for all loss or damage to materials or equipment due to any cause, including but not limited to loss or damage resulting from cas ualty.

INDEMNIFICATION: *Purchaser agrees to indemnify and hold Contractor, its directors, officers, stockholders , employees, agents and subcontractors, harmless from and against any and all claims, demands, causes of action (including third party claims, demands or causes of action for contribution or indemnification), liability and costs (including attorneys' fees and other costs of defense) asserted and/or filed by Purchaser or any third party(ies), inc luding without limitation Purchaser's employees, and arising out of or as a result of: (i) the presence of Contractor or its subcontractors at the job site, (ii) the work performed by Contractor or its subcontractors, or (iii) any negligent act or omission of Purchaser, its employees, agents, consultants, other contractors or any person or entity under Purchaser's control; except to the extent that such claims, demands, causes of action, liabilities or costs are caused by the negligence of Contractor or its subcontractors.*

INTERPRETATION: This contract shall be governed by and construed in accordance with the laws of the state of the job site location. If any term, provision or condition contained herein shall, to any extent, be invalid or unenforceable, pursuant to state law or otherwise, the remainder of the terms, provisions and condi tions herein (or the application of such term, provision, or condition to persons or circumstances other than thos

e in respect of which it is invalid or unenforceable) shall not be affected thereby, and each term, provision and c ondition of this contract shall be valid and enforceable to the fullest extent permitted by law.

ASSIGNMENT & SUBLETTING: Purchaser shall not have the right to transfer or assign its rights and/or obli gations under this contract to any third party, related or unrelated, without the express written consent of Cont ractor. Contractor shall have the right to transfer, assign or sublet all or any portion of its rights or obligati ons hereunder, but sucht ransfer, assignment or subletting shall not relieve Contractor from its full obligati ons to Purchaser unless such transfer, assignment or subletting is pursuant to the sale of Contractor, or the di vision of Contractor responsible for this contract, to a third party.

MISCELLANEOUS: The terms and conditions set forth herein constitute the entire understanding of the parties relating to the work to be performed, and materials and equipment to be provided, by Contractor for t he Purchaser. All previous proposals, offers, and other communications relative to the provisions of the su bject work, oral or
written, are hereby superseded, except to the extent that they have been expressly incorporated herein. Any modi fications or revisions of any provisions herein or any additional provisions contained in any purchase order, ack nowledgment, or other form of the Purchaser are hereby expressly objected to by Contractor and shall not operate to modify this
contract. This contract shall take effect upon acceptance and execution by both parties.

Subject: RE: San Antonio Water Co LSTW Proposal - Layne/BESST
Date: Tuesday, February 22, 2022 at 11:59:42 AM Pacific Standard Time
From: Oman, Tim
To: Brian Lee
CC: Noah Heller, Trujillo, Ricky
Attachments: image007.png, image008.png, image009.png, image010.png, image011.png, image012.png, image013.png, image014.png, image015.png, image016.png, image017.png, image018.png

Brian,

Reponses below:

Where would that savings come from? I'm assuming Work Plan and Site Management.

The savings on breaking out the Besst line items on a separate proposal is that it would eliminate markup that we have to apply to them when they are set up as a subcontractor under Layne. I would say roughly it could provide a savings of somewhere in the range of 30-40k if each of us contracted directly as opposed to a single contract.

I understand most of the line items. What does the Dye injection and tracing provide?

The Dye Injection and Tracing line item is Noah's profiling once the LSTW has been built.

Any chance you can provide me some specific benefits to going with the larger hole? How much (in rough dollars), will we be able to 'reuse' for the production hole?

Having the RD20 rig with capability to set the 24" conductor casing if needed provides security that we will be able to handle the potential drilling conditions in the 300' below ground surface. If we took the approach of the rig we had initially planned there is a probability that you would be fighting lost circulation in the first 300' which could be a costly hourly drill rate + lost circulation materials. Also, in the event you can't control the lost circulation it is possible that after that attempt you would have to demob that rig and mobilize a rig like the RD20 so the attempt might have been a lost expense. If you end up setting the 24" casing up top to stabilize the hole it can be utilized while installing the production well.

Roughly, what would the budgetary number be if we went with a smaller test hole? Shallower? I'm assuming a smaller rig would significantly lower cost for mob/demob, as a minimum.

It would be difficult for me to provide a good number quickly but there would be a savings. If you approached using a standard table drive rig and hoped for the best on lost circulation in the first 300' there would be a lower mob/demob cost. The RD20 package has more loads and has a higher cost related to mobilization. Outside of mobilization/demobilization most other line items would stay about where they are. There might be a slight savings on other items, but the risk would be the potential for lost circulation which would trigger and hourly rig rate which might in the long run offset your savings of attempting that approach. If the PROC would like us to provide that cost option with greater detail following you meeting just let us know.

Tim Oman
Division Business Development Manager
Water Resources Division

Cell: 805-896-6426
Email: Timothy.Oman@gcinc.com

www.graniteconstruction.com

From: Brian Lee <Blee@sawaterco.com>
Sent: Tuesday, February 22, 2022 1:33 PM
To: Oman, Tim <Timothy.Oman@gcinc.com>
Cc: Noah Heller <nheller@besst-inc.com>; Trujillo, Ricky <Ricky.Trujillo@gcinc.com>
Subject: Re: San Antonio Water Co LSTW Proposal - Layne/BESST

Tim,

Received. Thank you. Where would that savings come from? I'm assuming Work Plan and Site Management.

I understand most of the line items. What does the Dye injection and tracing provide?

Any chance you can provide me some specific benefits to going with the larger hole? How much (in rough dollars), will we be able to 'reuse' for the production hole?

Roughly, what would the budgetary number be if we went with a smaller test hole? Shallower? I'm assuming a smaller rig would significantly lower cost for mob/demob, as a minimum.

I'm trying to anticipate all possible questions from my PROC.

From: "Oman, Tim" <Timothy.Oman@gcinc.com>
Date: Monday, February 21, 2022 at 12:48 PM
To: Brian Lee <Blee@sawaterco.com>
Cc: Noah Heller <nheller@besst-inc.com>, "Trujillo, Ricky" <Ricky.Trujillo@gcinc.com>
Subject: San Antonio Water Co LSTW Proposal - Layne/BESST

Brian,

Good afternoon, as discussed, I have attached our proposal for the long screen test well. This includes the approach utilizing the RD20 drill rig with the capability to set the 24” deep conductor casing if needed. One area that could possibly provide savings to San Antonio Water would be for us to break out the BESST scope of work in a separate proposal and have you contract directly with both Layne and BESST. This would eliminate some markup that is necessary when we have a subcontractor under our scope. Through our license agreement and the BESST patent’s we would still be able to utilize the same method for negotiating a contract, but it could provide a savings. Just wanted to make sure you had this proposal for your meeting tomorrow. Once you have had a chance to review if you have any questions or concerns, please contact us.

Tim Oman
Division Business Development Manager
Water Resources Division

Cell: 805-896-6426
Email: Timothy.Oman@gcinc.com

www.graniteconstruction.com

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Subject: Additional Response and Information for the Profiling with the tracer
Date: Tuesday, February 22, 2022 at 12:28:37 PM Pacific Standard Time
From: Noah Heller
To: Brian Lee
CC: Oman, Timothy
Attachments: image.png

Hi Brian See BESST's additional response in blue below.

Where would that savings come from? I'm assuming Work Plan and Site Management.

The savings on breaking out the Besst line items on a separate proposal is that it would eliminate markup that we have to apply to them when they are set up as a subcontractor under Layne. I would say roughly it could provide a savings of somewhere in the range of 30-40k if each of us contracted directly as opposed to a single contract.

I understand most of the line items. What does the Dye injection and tracing provide?

The Dye Injection and Tracing line item is Noah's profiling once the LSTW has been built.

BESST Response: The tracer and depth dependent sampler will be used to profile the long screened test well as Tim described. When using the conventional zone test, each zone test includes construction of a temporary well with 20 to 30 feet of screen, development, testing and deconstruction costs at approximately $40,000/test. Therefore, most utilities only have 3 to 5 tests completed. The method that BESST is using provides up to 20 zone test equivalents at the costs specified in the proposal. The provides much more detail about the zonal flow and chemistry before the production well is constructed. BESST has two components to its proposal. 1) profiling the test well - about $55,000 to $60,000 and geologic site management and reporting - the balance of our fees. As Tim mentioned, monies can be saved by contracting BESST and Layne independently.

Any chance you can provide me some specific benefits to going with the larger hole? How much (in rough dollars), will we be able to 'reuse' for the production hole?

Having the RD20 rig with capability to set the 24" conductor casing if needed provides security that we will be able to handle the potential drilling conditions in the 300' below ground surface. If we took the approach of the rig we had initially planned there is a probability that you would be fighting lost circulation in the first 300' which could be a costly hourly drill rate + lost circulation materials. Also, in the event you can't control the lost circulation it is possible that after that attempt you would have to demob that rig and mobilize a rig like the RD20 so the attempt might have been a lost expense. If you end up setting the 24" casing up top to stabilize the hole it can be utilized while installing the production well.

Roughly, what would the budgetary number be if we went with a smaller test hole? Shallower? I'm assuming a smaller rig would significantly lower cost for mob/demob, as a minimum.

It would be difficult for me to provide a good number quickly but there would be a savings. If you approached using a standard table drive rig and hoped for the best on lost circulation in the first 300' there would be a lower mob/demob cost. The RD20 package has more loads and has a higher cost related to mobilization. Outside of mobilization/demobilization most other line items would stay about where they are. There might be a slight savings on other items, but the risk would be the potential for lost circulation which would trigger and hourly rig rate which might in the long run offset your savings of attempting that approach. If the PROC would like us to provide that cost option with greater detail following you meeting just let us know.

Kind Regards,

Noah

Noah Heller, MS PG (CA 5792)
CEO-President / Senior Hydrogeologist
BESST, Inc.
50 Tiburon Street, Suite 7, San Rafael, CA 94901
O: 415.453.2501 / M: 415.302.7354
nheller@besst-inc.com
NEW WEBSITE ADDRESS: www.besst-inc.com

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