

## **Monitoring 2019 Quarter 4**

### **Water Level Monitoring Data**

The attached table summarizes the results of the Q4 2019 San Antonio Basin Water Level Monitoring for the wells in the monitoring network, and includes the status of current access agreements, and depth to water measurements for all wells that were able to be accessed during the sampling event. Green highlighting indicates that the San Antonio GSA currently has an access agreement for the given well, or that there are no special access requirements. Yellow highlighting indicates that the well is privately owned and the GSA does not currently have an access agreement. These wells were not monitored during this event. Red highlighting indicates that the well owner declined to sign an access agreement and so the well was not monitored. The following list summarizes some of the noteworthy events or observations that took place during this sampling event:

- A water level sounder became stuck at a depth of approximately 157 feet in the “Stephen’s Well”, owned by Kick On Vineyards. The sounder was left at the well site with a notice to contact GSI for details. GSI attempted to contact, Tom Prendiville (site contact), but was unsuccessful. A licensed pump contractor will likely have to go to the well site and remove or adjust the pump in order to remove the sounder from the well. It is recommended that a PVC water level access tube be installed so that the sounder does not become stuck in the future.
- Several wells near the Barka Slough (see table) were unable to be accessed due to the presence of poison oak and overgrown brush. A good faith effort was made to locate the wells but in most cases the brush is overgrown enough so that the well was not visible. One of the wells, 17Q1, was potentially located but could not be sampled due to what appears to be fire damage.
- One of the county wells, 14L1, could not be accessed because the well had a lock that was inconsistent with the other county wells. Matt Scrudato was notified of this issue and said the county will have to replace the lock to match with the other county wells. GSI will be in contact with Matt to perform this work before the next sampling event.

### **Streamflow Data**

Annual graphs of available streamflow data are provided at the links below:

- [https://nwis.waterdata.usgs.gov/usa/nwis/uv/?cb\\_00060=on&cb\\_00065=on&format=gif\\_default&site\\_no=11135800&period=&begin\\_date=2019-01-01&end\\_date=2019-11-15](https://nwis.waterdata.usgs.gov/usa/nwis/uv/?cb_00060=on&cb_00065=on&format=gif_default&site_no=11135800&period=&begin_date=2019-01-01&end_date=2019-11-15) – USGS 11135800 San Antonio C A Los Alamos CA
- [https://nwis.waterdata.usgs.gov/nwis/uv?cb\\_00060=on&cb\\_00065=on&format=gif\\_stats&site\\_no=11136100&period=&begin\\_date=2019-01-01&end\\_date=2019-11-15](https://nwis.waterdata.usgs.gov/nwis/uv?cb_00060=on&cb_00065=on&format=gif_stats&site_no=11136100&period=&begin_date=2019-01-01&end_date=2019-11-15) – USGS 11136100 San Antonio C NR Casmalia CA

### **Additional Comments**

Plots of groundwater levels and streamflow data versus time (including historical data) will be prepared and made available in the Annual Monitoring Report.

The estimated cost to pull the Stevens Well pump to remove the stuck water level probe and install a water level access tube is \$2,154.55 (quote attached). We request that the GSA hire a contractor to do this work.

We will work with Anna Olsen to resolve well access issues.

Water level data loggers and transducers will be installed in wells that are accessible during the next quarterly monitoring event.

**San Antonio Basin Monitoring Results  
Q4 2019**

Type	USGS Site No.	State Well No.	Site Name	Description	Well Type	Water Level Type	Area	DTW (ft) on 11/5/2019	Sampling Notes
Single	344836120270000	009N034W34N002S	SAHC	San Antonio Harris Creek	Study	Continuous	West San Antonio Basin	73.20	
Single	344548120274000	008N034W21A002S	SASA	across from 21A1, San Antonio study well	Study	Continuous	West San Antonio Basin	43.28	
Single	344622120254000	008N034W14L002S	SAGR	San Antonio study well	Study	Continuous	West San Antonio Basin	62.53	
Single	344546120253000	008N034W23H001S	SAHG	San Antonio study well	Study	Continuous	West San Antonio Basin	40.74	
Single	344524120202000	008N033W22G001S	SALS	San Antonio Laguna Seca	Study	Continuous	Central San Antonio Basin	35.36	
Single	344436120162000	008N032W29L004S	SALA	next to Los Alamos streamgage	Study	Quarterly Discrete	Central San Antonio Basin	44.10	Well still had transducer installed
Cluster	344532120234000	008N033W19K002S	SACR 1	Multi Cluster	Study	Continuous	West San Antonio Basin	46.30	
Cluster	344532120234000	008N033W19K002S	SACR 2	Multi Cluster	Study	Continuous	West San Antonio Basin	73.10	
Cluster	344532120234000	008N033W19K004S	SACR 3	Multi Cluster	Study	Continuous	West San Antonio Basin	109.07	
Cluster	344532120234000	008N033W19K005S	SACR 4	Multi Cluster	Study	Continuous	West San Antonio Basin	94.43	
Cluster	344532120234000	008N033W19K002S	SACR 5	Multi Cluster	Study	Continuous	West San Antonio Basin	98.36	
Cluster	344520120174000	008N032W19M001S	SACC 1	Multi Cluster	Study	Continuous	Central San Antonio Basin	216.13	
Cluster	344520120174000	008N032W19M002S	SACC 2	Multi Cluster	Study	Continuous	Central San Antonio Basin	206.68	
Cluster	344520120174000	008N032W19M003S	SACC 3	Multi Cluster	Study	Continuous	Central San Antonio Basin	212.75	
Cluster	344520120174000	008N032W19M004S	SACC 4	Multi Cluster	Study	Continuous	Central San Antonio Basin	164.12	
Cluster	344520120174000	008N032W19M001S	SACC 5	Multi Cluster	Study	Continuous	Central San Antonio Basin	107.23	
Single	344802120256000	008N034W02M001S	2M1	Hampton Farms Well	Private	Quarterly Discrete	West San Antonio Basin	152.20	Well 9 (1,200' north) was pumping
Single	344836120265000	009N034W34P001S	34P1	NE Corner of VAFB	Private	Quarterly Discrete	West San Antonio Basin	-	Smaller WL sounder necessary
Single	344611120283000	008N034W17Q001S	17Q1	S side Barka Slough	Private	Quarterly Discrete	West San Antonio Basin	-	Overgrown brush prevented access
Single	344550120274000	008N034W21A001S	21A1	S side Barka Slough	Private	Quarterly Discrete	West San Antonio Basin	-	Overgrown brush prevented access
Single	344618120283000	008N034W17K002S	17K2	S side Barka Slough	Private	Quarterly Discrete	West San Antonio Basin	-	Overgrown brush prevented access
Single	344630120290000	008N034W17E001S	17E1	SW side Barka Slough	Private	Quarterly Discrete	West San Antonio Basin	-	Overgrown brush prevented access
Single			White Hawk 1	White Hawk Vineyard	Private	Quarterly Discrete	Central San Antonio Basin	92.70	
Single	344559120164000	008N32W17N001S	White Hawk 4	White Hawk Vineyard	Private	Quarterly Discrete	Central San Antonio Basin	118.50	
Single			Mesa Vineyard	Premiere Coastal	Private	Quarterly Discrete	Central San Antonio Basin	215.21	
Single	344700120190000	008N033W02N001S	2N1	Premiere Coastal	Private	Quarterly Discrete	Central San Antonio Basin	240*	Threaded bolt on access port
Single	344742120185000	008N033W02R001S	2R1	Premiere Coastal	Private	Quarterly Discrete	Central San Antonio Basin	116.62	
Single	344659120232000	008N033W07	Stephen's Well	Kick On Vineyards	Private	Quarterly Discrete	West San Antonio Basin	-	Sounder stuck in well
Single	344725120204000	008N033W10	4-Deer Field	4-Deer Ranch	Private	Quarterly Discrete	Central San Antonio Basin	24.45	
Single	344755120203000	008N033W03L001S	4-Deer Highway	4-Deer Ranch	Private	Quarterly Discrete	Central San Antonio Basin	92.33	
Single	344632120210000		Schaff Well	Rancho de las Flores	Private	Quarterly Discrete	Central San Antonio Basin	213.32	
Single	344624120254000	008N034W14L001S	14L1		Private	Quarterly Discrete	West San Antonio Basin	-	County did not provide appropriate key
Single	344609120181000	008N033W13Q001S	13Q1	Berringer S of office	Private	Quarterly Discrete	Central San Antonio Basin	-	
Single	344645120182000	008N033W13C001S	13C1	Berringer N of office	Private	Quarterly Discrete	Central San Antonio Basin	-	
Single	344457120174000	008N032W30D001S	30D1	Field W of Los Alamos	Private	Quarterly Discrete	Central San Antonio Basin	-	
Single	344457120122000	008N032W25D001S	25D1	Alisos Cyn Rd NE of 101	Private	Quarterly Discrete	East San Antonio Basin	-	
Single	344521120201000	008N033W22K003S	22K3	Mid San Antonio Basin	Private	Quarterly Discrete	Central San Antonio Basin	-	
Single	344522120072000	008N031W22J001S	22J1	Zaca Mesa Vineyard	Private	Quarterly Discrete	East San Antonio Basin	-	
Single	344513120082000	008N031W22N001S	22N1	DEMETRIA 1	Private	Quarterly Discrete	East San Antonio Basin	-	
Single	344522120082000	008N031W22M001S	22M1	OAK SAVANAH	Private	Quarterly Discrete	East San Antonio Basin	-	
Single	344530120245000	008N034W24E001S	24 E1	SE of Jct Hwys 1 & 135	Private	Quarterly Discrete	West San Antonio Basin	-	
Single	344518120221000	008N033W20Q002S	20Q2	SW Hwy 135 - Batchelder	Private	Quarterly Discrete	West San Antonio Basin	-	
Single	344938120266000	009N034W27L001S	27L1	GAS CO 1	Private	Quarterly Discrete	West San Antonio Basin	-	
Single	344611120160000		VERNAS 1	VERNAS 1	WO Permission	Quarterly Discrete	Central San Antonio Basin	-	
Single	344601120160000		VERNAS 2	VERNAS 2	WO Permission	Quarterly Discrete	Central San Antonio Basin	-	
Single	344234120105000		HWY 101 CATTLE	HWY 101 CATTLE	WO Permission	Quarterly Discrete	East San Antonio Basin	-	
Single	344412120141000	008N032W27P003S	GUZMAN 2	GUZMAN 2	WO Permission	Quarterly Discrete	East San Antonio Basin	-	
Single	344407120141000	008N032W34C001S	GUZMAN 3	GUZMAN 3	WO Permission	Quarterly Discrete	East San Antonio Basin	-	
Single	344640120274000	008N034W16C002S	16C2	N side of Barka Slough	Private	Continuous	West San Antonio Basin	-	
Single	344640120274000	008N034W16C004S	16C4	N side of Barka Slough	Private	Continuous	West San Antonio Basin	-	
Single	344633120282000	008N034W17H001S	17H1	N side of Barka Slough	Private	Quarterly Discrete	West San Antonio Basin	-	
Single	344636120274000	008N034W16F001S	16F1	N side of Barka Slough	Private	Quarterly Discrete	West San Antonio Basin	-	
Single	344626120273000	008N034W16G003S	16G3	N side of Barka Slough	Private	Quarterly Discrete	West San Antonio Basin	-	
Single	344441120173000	008N032W30E005S	30E5	Carrari .3 W of Los Alamos	Private	Quarterly Discrete	Central San Antonio Basin	-	
Single	344454120181000	008N033W25B005S	25B5	Field W of 30D1	Private	Quarterly Discrete	Central San Antonio Basin	-	
Single	344416120151000	008N032W28P004S	28P4	100' NW of 28P1	Private	Quarterly Discrete	East San Antonio Basin	-	
Single	344841120242000	008N034W36R	Careaga Lease	Northwest San Antonio Basin	Private	Quarterly Discrete	West San Antonio Basin	-	

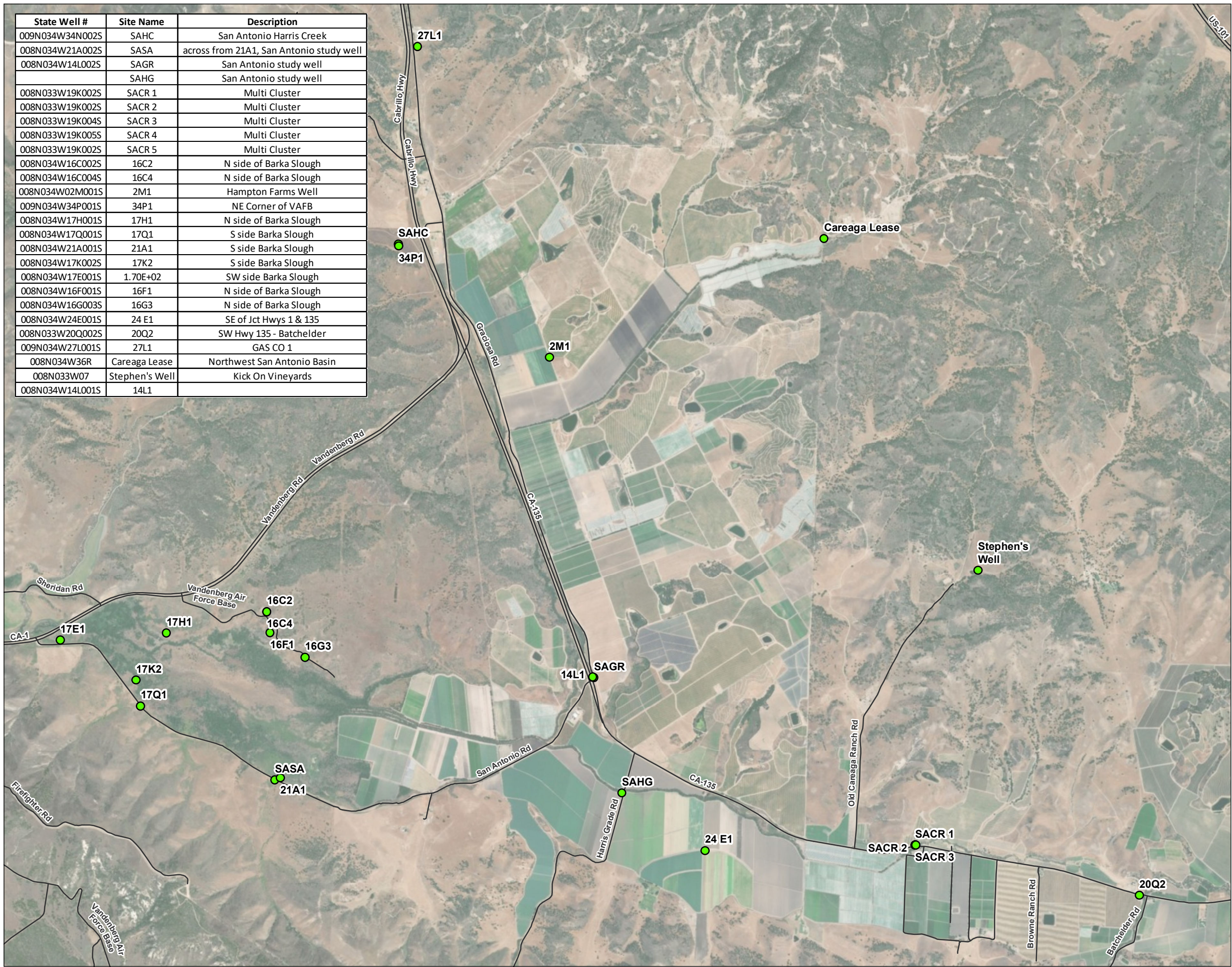
Notes:

- have access agreement, or no special access required
- do not have access agreement
- access agreement declined by owner

\*Water level measurement from pump test performed by well owner on 10/31/2019



State Well #	Site Name	Description
009N034W34N002S	SAHC	San Antonio Harris Creek
008N034W21A002S	SASA	across from 21A1, San Antonio study well
008N034W14L002S	SAGR	San Antonio study well
	SAHG	San Antonio study well
008N033W19K002S	SACR 1	Multi Cluster
008N033W19K002S	SACR 2	Multi Cluster
008N033W19K004S	SACR 3	Multi Cluster
008N033W19K005S	SACR 4	Multi Cluster
008N033W19K002S	SACR 5	Multi Cluster
008N034W16C002S	16C2	N side of Barka Slough
008N034W16C004S	16C4	N side of Barka Slough
008N034W02M001S	2M1	Hampton Farms Well
009N034W34P001S	34P1	NE Corner of VAFB
008N034W17H001S	17H1	N side of Barka Slough
008N034W17Q001S	17Q1	S side Barka Slough
008N034W21A001S	21A1	S side Barka Slough
008N034W17K002S	17K2	S side Barka Slough
008N034W17E001S	1.70E+02	SW side Barka Slough
008N034W16F001S	16F1	N side of Barka Slough
008N034W16G003S	16G3	N side of Barka Slough
008N034W24E001S	24 E1	SE of Jct Hwys 1 & 135
008N033W20Q002S	20Q2	SW Hwy 135 - Batchelder
009N034W27L001S	27L1	GAS CO 1
008N034W36R	Careaga Lease	Northwest San Antonio Basin
008N033W07	Stephen's Well	Kick On Vineyards
008N034W14L001S	14L1	

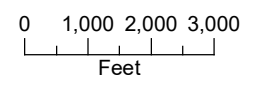
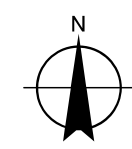


**DRAFT FIGURE 1**  
**Wells in Western Portion**  
**of San Antonio Basin**  
**San Antonio Basin Water**  
**Level Monitoring**

**LEGEND**

- Monitoring Well
- Major Road

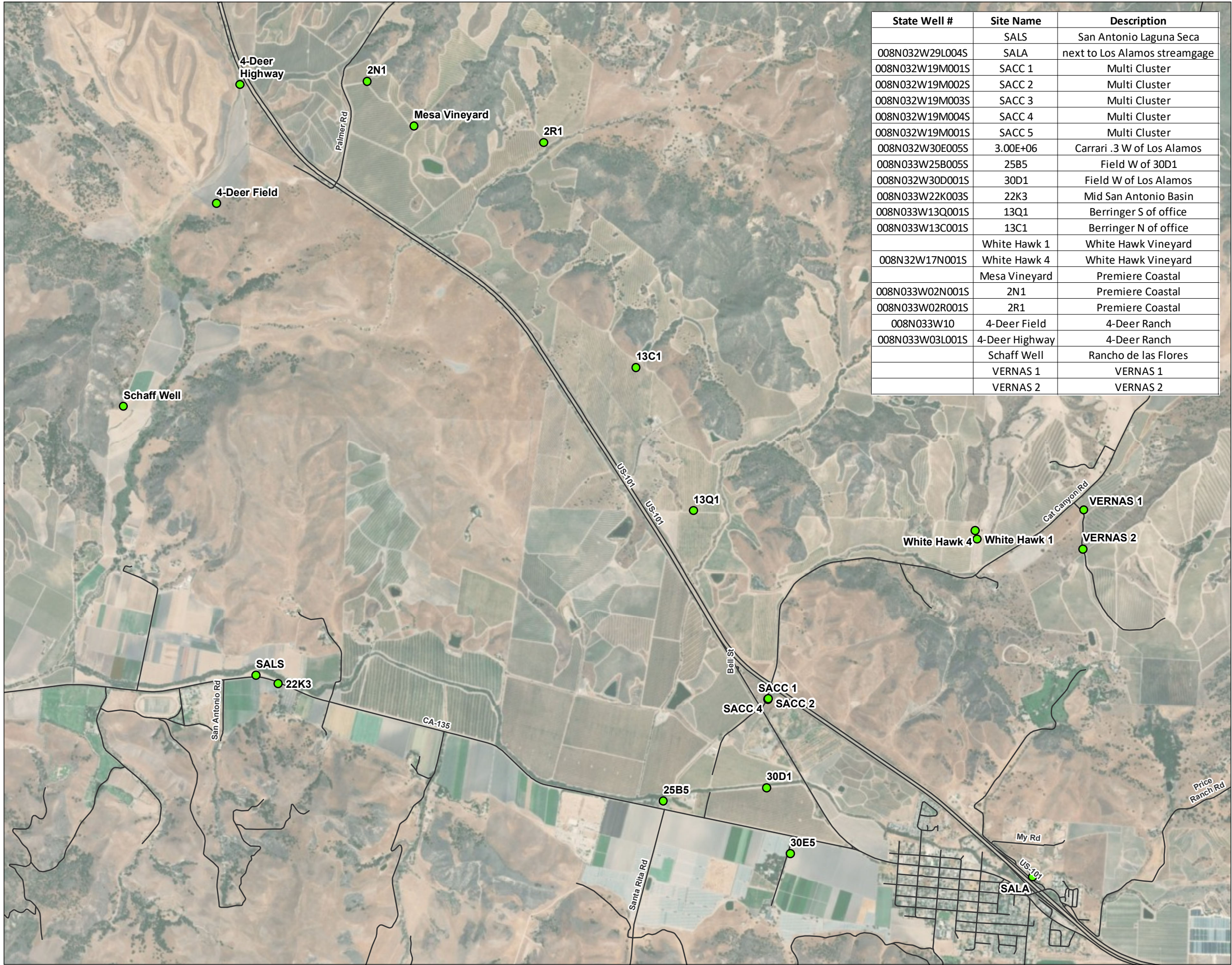
**NOTES:**



Date: July 17, 2019  
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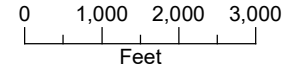
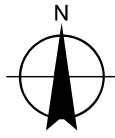
State Well #	Site Name	Description
	SALS	San Antonio Laguna Seca
008N032W29L004S	SALA	next to Los Alamos streamgage
008N032W19M001S	SACC 1	Multi Cluster
008N032W19M002S	SACC 2	Multi Cluster
008N032W19M003S	SACC 3	Multi Cluster
008N032W19M004S	SACC 4	Multi Cluster
008N032W19M001S	SACC 5	Multi Cluster
008N032W30E005S	3.00E+06	Carrari .3 W of Los Alamos
008N033W25B005S	25B5	Field W of 30D1
008N032W30D001S	30D1	Field W of Los Alamos
008N033W22K003S	22K3	Mid San Antonio Basin
008N033W13Q001S	13Q1	Berringer S of office
008N033W13C001S	13C1	Berringer N of office
	White Hawk 1	White Hawk Vineyard
008N32W17N001S	White Hawk 4	White Hawk Vineyard
	Mesa Vineyard	Premiere Coastal
008N033W02N001S	2N1	Premiere Coastal
008N033W02R001S	2R1	Premiere Coastal
008N033W10	4-Deer Field	4-Deer Ranch
008N033W03L001S	4-Deer Highway	4-Deer Ranch
	Schaff Well	Rancho de las Flores
	VERNAS 1	VERNAS 1
	VERNAS 2	VERNAS 2

**DRAFT FIGURE 2**  
**Wells in Central Portion**  
**of San Antonio Basin**  
 San Antonio Basin Water  
 Level Monitoring

**LEGEND**

- Monitoring Well
- Major Road

**NOTES:**



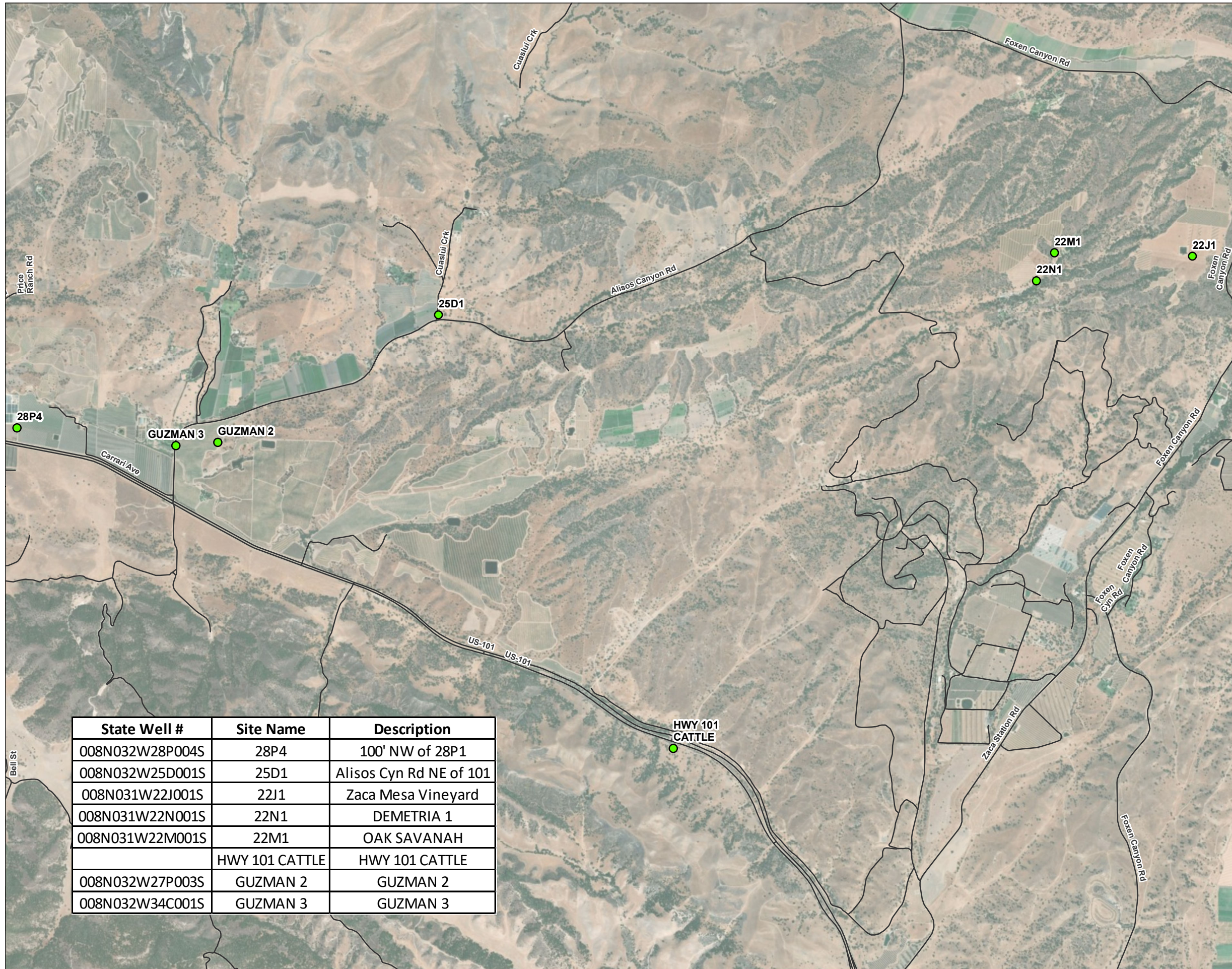
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**DRAFT FIGURE 3**

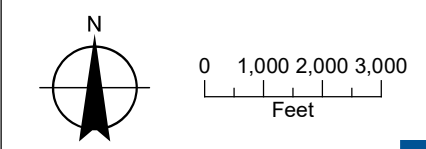
**Wells in Eastern Portion  
of San Antonio Basin**  
San Antonio Basin Water  
Level Monitoring



**LEGEND**

- Monitoring Well
- Major Road

**NOTES:**



Date: July 17, 2019  
Data Sources:



State Well #	Site Name	Description
008N032W28P004S	28P4	100' NW of 28P1
008N032W25D001S	25D1	Alisos Cyn Rd NE of 101
008N031W22J001S	22J1	Zaca Mesa Vineyard
008N031W22N001S	22N1	DEMETRIA 1
008N031W22M001S	22M1	OAK SAVANAH
	HWY 101 CATTLE	HWY 101 CATTLE
008N032W27P003S	GUZMAN 2	GUZMAN 2
008N032W34C001S	GUZMAN 3	GUZMAN 3