

ARVIN-EDISON WATER STORAGE DISTRICT

REPORT OF DISTRICT OPERATIONS

January 2021



***Cleaning Out Canal
(Wind Storm Debris)***

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WATER SUPPLY

Friant Division Central Valley Project (CVP)

- The 2020 Water Year allocation remains at 65% Class 1 (26,000 AF) and 0% Class 2
- Exhibit “A” provides additional supply information for 2020 Water Year
- The Creek Fire was impacting Millerton Lake operations, which provided minimal releases from upstream Southern California Edison reservoirs, which nearly resulted in prorated conditions on the Friant-Kern Canal and District responded by shifting sources (CVC and wellfield) to assist in reservoir low point concerns. The source shift resulted in increased carryover in Millerton Lake into Water Year 2021.
- The Friant-Kern Canal is currently filling and it is estimated to be back in full service by February 9th. District demands will be met with groundwater and/or CVC supplies.

San Joaquin River Restoration Program (SJRRP)

- The 2020 Runoff Year ended on September 30th and was finalized at 886,025 AF of natural river runoff in the SJR watershed, which is a “Dry” year type pursuant to SJR settlement and accordingly, the SJRRP would receive 202,197 AF of water supply
- Unreleased Restoration Flow (URF) supplies made available include 41,400 AF to date with 2,070 AF District share and additionally Priority URFs, as a result of prior agreement, generated 4,690 AF
- Recapture supplies are estimated at nearly 30,000 AF (approximately 1,700 AF District share at this time and subject to change)
- SJRRP initially requested 3,800 AF from District from the 2016 Exchange (up to 7,000 AF is available), however with the improved hydrology the exchange was deferred
- District’s RWA credit beginning balance is approximately 90,630 AF (subject to reconciliation and staff review). RWA credits allow the District to purchase water for \$10/AF during wet periods when RWA water is declared.
- The 2021 Runoff Year was initially estimated at 296,000 AF of natural river runoff in the SJR watershed, which is a “Critical Low” year type pursuant to SJR settlement and accordingly, the SJRRP would receive 0 AF of water supply.

Shasta System CVP

- The 2020 allocation for south of Delta Ag was finalized at 20%

State Water Project (SWP)

- The initial 2021 Table A allocation remains at 10%

Kern River

- 2020 supplies are estimated at 43% of average

Water Bank Facilities

- Given limited surface supply allocations, there is a heavy reliance on wellfields (~76,600 AF) for the 2020 Water Year

Metropolitan Water District (MWD) Water Management Program

- MWD beginning balance is 142,257 AF in water bank reserves
- MWD did not request return for the 2020 Water Year
- The District obtained its eleventh consecutive year approval from the State Water

Resources Control Board regarding a Petition for a Consolidated Place-of-Use (CPOU), which now expires on July 15, 2021

- The CPOU petition includes the ability to exchange all types of Arvin-Edison supplies with MWD including unbalanced exchanges
- The District's 10-year NEPA documentation is complete and approved until March 21, 2024. Staff, along with MWD, DWR, and Reclamation continue pursuit of a long-term CPOU approval through November 2035
- District has begun communicating with MWD staff regarding 2021 Water Quality Subaccount activity to regulate surface water supplies

Rosedale-Rio Bravo Water Management Program

- The District's 2020 beginning account balance for water held in RRBWSD is 74,462 AF
- District has received the maximum program amount of 10,000 AF from May through September to supplement other surface water supplies and therefore the account balance will reduce to 64,462 AF
- District has received correspondence from RRBWSD to jointly review provisions of the 2009 long term banking agreement.

Kern Delta Water District

- Staff continues meeting with KDWD staff to advance water management opportunities including joint partnership in groundwater recharge facilities and additional interconnection facilities
- Kern Delta's return of previously banked water to MWD under the KDWD/MWD program was terminated for 2020

District Partnerships

- The District has participated in water management programs with the following districts/agencies in Water Year 2020:

Belridge Water Storage District	Lewis Creek Water District
Buena Vista Water District	Madera Irrigation District
Chowchilla Water District	Metropolitan Water District
City of Lindsay	Pixley Irrigation District
County of Fresno	Rosedale Rio Bravo WSD
County of Tulare	San Luis Water District
Del Puerto Water District	San Joaquin River Restoration Program
Fresno Irrigation District	Saucelito Irrigation District
Garfield Water District	Shafter-Wasco Irrigation District
Hills Valley Irrigation District	Tri-Valley Water District
Kern Delta Water District	Tulare Irrigation District
Kern Tulare Water District	Westside Mutual Water Company

WATER DEMAND

- District surface water deliveries for the month were 2,480 AF
- The following is a summary of surface water deliveries for January 2021:

	January 2021		Year to Date	
	Historical	2020 WY	Historical	2020 WY
Turnout Deliveries	2,080	2,456	129,373	118,880
In-Lieu Deliveries	-	-	-	-
Temporary Water	-	24		108
Spreading	-	-	-	1,118
Total	2,080	2,480	129,373	120,106

- Exhibit "B" illustrates the delivery data
- The month's peak daily in-District demand was 134 cfs, which occurred on the 21
- Exhibit "C-1" details Canal Water Quality information
- Exhibit "C-2" presents the Aquatic Pest Control Treatments (\$0)

GENERAL

- Staff continues to practice several safety measures in response to COVID-19
- This month, two (2) employees reached milestone years of service anniversaries: Forrest Frick Pumping Plant Operator Greg Lajoie (40 Years) and Watermaster Chris Hogue (10 Years)
- District vehicles consumed an estimated 4,100 gallons of fuel during the month (average fuel efficiency of 10.2 mpg)
- There were 473 hours lost due to illness (including COVID hours) and zero (0) hours lost due to on-the-job injuries with no employees out on Workers' Compensation Claim
- Exhibit "D" highlights precipitation, temperature, and wind speed
- Exhibit "E" summarizes energy consumption and power demand for the water year (approximately 125 million kilowatt hours)
- Exhibit "I" list various meetings for management and engineering staff

ENGINEERING DEPARTMENT ACTIVITIES

Routine Activities

- Review and accounting of District's water supply and related contracts
- Administration or proposals of water management and wheeling agreements
- Groundwater level surveys and associated exhibits
- Water quality testing
- ArcGIS database updates and maintenance
- Inspection/evaluation and/or repair of cathodic protection rectifiers and test stations
- CIMIS station management (<https://cimis.water.ca.gov/Stations.aspx>)
- Land use/crop surveys with data entry
- Monthly/annual reports regarding water deliveries, water use, and energy use



Real Time Water Quality Monitoring Device Installation Underway



Well Repairs Underway (N11)

Grants & Funding Opportunity Updates

- 2015 USBR Water Conservation Grant administration (Groundwater Metering Project)
 - Coordination of environmental and construction activities
 - A one-year time extension due to various reasons (environmental, unexpected well repairs, and COVID-19) was approved by the Bureau with a deadline now of March 31, 2021
 - All 50 sites are complete and minor miscellaneous items including painting remains but will be completed prior to the grant deadline
- Awaiting results on the following grant applications:
 - 2020 USBR Water and Energy Efficiency Grant for DiGiorgio In-Lieu Water Conservation Project – Phase 2
 - 2020 USBR WaterSMART grant application for the Forrest Frick Pipeline/ Eastside Canal Intertie
 - Regional Conservation Partnership Program (NRCS) funding for expansion of Tejon Unit gravity pipelines service area
- NRCS landowner incentive programs assist with implementing various conservation activities, including but not limited to, irrigation system improvements, filtration needs, water/nutrient/pest management, and engine replacement:
 - Phone (661) 336-0967
 - Website (www.ca.nrcs.usda.gov)

Other Activities

- Administration of on-going water management programs
- Review consultants' task orders for the upcoming 2021 water year
- Technical support and review of ongoing projects/studies such as:
 - Sunset Spreading Works (w/Kern Delta WD)

- Basin, pump station and pipeline design reviews
- Operations and Maintenance agreement development
- Power options (PG&E vs. PWRPA)
- Potential Interconnections (w/ Wheeler Ridge-Maricopa WSD)
 - Easement review
 - Pipeline extension and outlet design (S73-P4 to 850 Canal)
- Groundwater Service Area CEQA Planning
 - Coordinate potential pipe alignments and environmental coverage area with staff and consultants
- Pump Replacement Program
 - Executed contract for the purchase of 17 new vertical pumps (P1)
- Turnout modification requests
 - Canopy Ag (E-29) upsize completed, reconciliation in progress
- Temporary and/or In-Lieu Water Service Contract Requests
 - Bolthouse (Lateral S64)
- Landowner pipeline replacement (adjacent to Sycamore Spreading)
- Cathodic protection system upgrades
 - FFPP discharge pipeline
- Pump Efficiency Testing
 - As needed for replaced pumps
- Investigate Potential Recharge Basins
 - Granite Quarry (East of HQ and Sycamore)
 - HWY 5 Gravel Pit (Mettler)
 - H&H Property (Caliente Creek)
 - Rudnick (Edison Area)
- Real Time Water Quality Monitoring
 - Installation and electrical integration was initiated
- CIMIS Station
 - Coordinated landline to cellular conversion with Department of Water Resources (installation pending)
- Intertie Pipeline Inspection
 - Investigation of latest methods for pipeline inspection

SGMA Activities

- Continued coordination meetings and outreach activities
- Attended various GSA meetings
- Coordinated GSA boundary revisions with neighboring agencies
 - Wheeler Ridge-Maricopa WSD, Kern Delta WD, and Improvement District No. 4
- Prioritization criteria for Projects and Management Actions
- Development of a potential Well Mitigation Policy
- Evaluate various Water Budget methodologies

Requests for Information/Easements/Planning Notices

- Water supply
- Water costs
- Historical groundwater levels
- Monitoring well conversions
- Water quality

- Land use data
- Easements and/or right-of-way encroachments
 - East Niles Community Services District
 - Shell Oil
- Reviewing/responding to multiple planning notices
 - Kern County (various developments/potential facility conflicts)
 - City of Arvin (General Plan Amendment)
- Reviewed/responded to environmental documents, as necessary
 - Sun Pacific Groundwater Recharge Facility near FKC

Power Related Activities

- Assisted PWRPA consultants with
 - Power coordination and monitoring
 - PWRPA invoice and demand data changes
 - Monthly billing anomalies/meter reconciliations
 - Load forecast updates and rate analysis
 - SAMBA load scheduling replacement review
 - Budget implications from PG&E WDT3 rate increase
- PG&E Power Safety Public Shutoff coordination
- Coordinated meter database changes with PG&E
- Reviewed long-term power management activities
 - Continued investigation of low head hydro potential (Intake Canal)
 - District Headquarters Solar proposal interconnection agreement
 - Reviewed available local solar renewable energy certificates to Western Renewable Energy Generation Information System (credits to be used by District/PWRPA)
 - Metropolitan Water District energy reconciliation report reviews
 - Investigated potential Sycamore Solar Project
 - Continued coordination of the Groundwater Service Program including cost-revenue analysis and program expansion rate study

SPREADING WORKS OPERATIONS (WELLFIELDS AND BASINS)

- Exhibit “F” summarizes wellfield production, which totaled 2,625 AF for the month (21% of historical maximum in January)
- Exhibit “G” summarizes gross direct spreading of 0 AF for the month
- Exhibits “H-1” and “H-2” summarize current static and/or pumping water in table and graphic forms
- Following is a summary of repairs associated with “active” District wells:

<u>Field</u>	<u>Well #</u>	<u>Year</u>	<u>HP</u>	<u>Reason</u>	<u>Work</u>
North Canal	11	2000	300	Excess Vibrations	pulled equipment, video, pump will be replaced
Tejon	101	2018	600	Softstart Electrical Short	Contractors troubleshot under warranty, replaced pole, startup pending

*Back in Service

- Seven (7) out of 86, or 8%, of District wells are currently out of service and consultants are reviewing repair options
 - Three (3) long-term failures in Sycamore 34, Tejon 82 and Tejon 91
 - Two (2) at Balancing Reservoir require additional investigation (shafts seized)
 - Two (2) see above table
- Well Replacement Program
 - PG&E and consultant coordination to review power service at North Canal and Tejon Spreading Works

OPERATIONS DEPARTMENT ACTIVITIES



Balancing Reservoir Wells Startup Testing (N15)



Operating North Canal Pumpback After Troubleshooting

Routine Activities

- Operate and monitor the District's water distribution and delivery systems including canals, ponds and reservoirs
- Conducted monthly safety meetings
- Inspected control systems at pumping plants (transducers, Cla-valves, battery back-ups, etc.)
- Assisted personnel in the repair, replacement, and/or maintenance of facilities on an as-needed basis for the following items:
 - Replaced flowmeter batteries (turnouts and wells)
 - Flushed and cleaned various turnouts and appurtenances
 - Greased North and South side turnout valve operators
 - Maintained weed control (pumping plants, turnouts, air vents, and isolation valves)
 - Changed lights and panel bulbs
 - Inspected/replaced water quality warning labels at turnouts
 - Cleaned and/or replaced air-chamber sight glasses
 - Replaced missing locks and chains (canal gates and turnouts)
- Staff performed end-of-month meter readings at wells, turnouts, and pumping plants (power)

Additional Activities

- Continued wellfield operations and maintenance
 - Maintain oil sight glasses

- Clean motor control cabinets
- Cleared alarms and reset all pump plants after power outages caused by wind storms
- Trained the new Basin Console operator
- Cleaned and inspected ball valves, risers, and bushings (North and South Pump Plants)
- Replaced damaged petcock ball valves (North and South turnouts)
- Responded to various pump plant alarms (reset and primed laterals)
- Replaced various meters
 - Turnout (C-59)
 - Wells (N15 and N17)
- Replaced various valve operators
 - Turnout (T-65)
- Inspected and setup two (2) new Operations trucks

Underground Service Alert (USA) Report

- District initiated 0
- Responded to 582 USA notices to locate District underground facilities
 - 18 required marking of District facilities
 - 47 were renewals
 - 517 with no conflicts

Power Outages and/or Interruptions Involving the Following Systems

- Balancing Reservoir, Laterals N8, N41, N55, North Canal Spreading Works, Sycamore Spreading Works, Laterals S32, S38, S64, S68, S73, S78, S88, S93, Intertie, and end of canal

Laterals Prorates (number of days)

- No prorates for the month

MAINTENANCE DEPARTMENT ACTIVITIES

Routine Activities

- Aquatic and terrestrial weed control (Intake Canal)
- Routine gardening and maintenance at Headquarters and CIMIS station
- Fence repair (Intake Canal)
- Grading (Tejon Spreading Works)
- Cleared out forebays (North and South Canal)
- Assisted other departments as needed (Pump Shop and Operations)
- Conducted monthly safety meeting

Additional Activities

- Resumed construction work for the Groundwater Meter Project
 - Completed installation of all grounding rods
- Removed excessive tumbleweeds and debris in the canal from the wind storm
- Backfilled washouts (South Canal)
- Remove and repair 16" valve (FFPP Unit #3)
- Prepped and painted various facilities
 - Lateral S93 pump plants
 - Coupler safety guards for horizontal pumps

- New turnout E-29
- Tejon Well 75



Repairing Washouts (South Canal)



Painting Coupler Safety Guards for Horizontal Pumps

Mechanic's Shop Repair Activities

- Routine weekly inspection on the fuel tank, gas pumps, and generator
- Fleet repairs/replacement parts

Part	Repair/Replaced	Part	Repair/Replaced
Brakes	2	Tail Lights	1
Tires	6	Trailer Lights	2
Tire Repairs	3	Wiper Blades	6
Rotors/Drums	2	Pulleys	2
Fuel Filters	4	Batteries	1
Fuel Pump	1	Belts	1

- Heavy Equipment Repairs
 - Repaired air brakes (trailer)
 - Replaced blades (mower)
 - Replaced hydraulic filters (Gradall)

PUMP DEPARTMENT ACTIVITIES

Routine Pump Maintenance Activities

- Replacing pump packing
- Pump bearing lubrication at various pumping plants
- Maintain drip oil on District Wells
- Inspection and maintenance of air compressors
- Inspection and/or adjustment of travelling water screens/moss screens.

Additional Activities

- Continued working with Engineering Department on Pump Replacement Program
 - Initiated pump plant modification to allow clearance for new 20 cfs pumps (N55-P1, S64-P1, and S73-P1)

- Replaced various coupler guards
- Replaced various damaged check valve arms and springs
- Installed new 5 cfs pump (N1-P2 Unit #6)
- Replaced sump pump water line (N1-P2)



Removing Pumps for Base Plate Modification in Preparation for New Pump Bowls

PUMP & MOTOR REPAIR SUMMARY

<u>Vertical Pumps</u>	<u>Pumping Plant/Wells</u>	<u>Unit</u>	<u>Size</u>	<u>Time/Hours</u>	<u>Reason</u>
<u>Vertical Motors</u>	None to report				
	North Canal Wellfield	11	300 HP	1,738	Worn Bearings
<u>Horizontal Pumps</u>	N1-P2	6	5 CFS	5,504	Loss of flow
	N55-P14	2	2.5 CFS	2,065	Worn sleeves
<u>Horizontal Motors</u>	None to report				

CONTROLS DEPARTMENT ACTIVITIES

Routine Activities

- SCADA/radio maintenance or troubleshooting

- Monthly and annual inventory
- Testing and repair/replacement of distribution system and well facility electrical components as needed

Component	Replaced/Repaired	Component	Replaced/Repaired
Contact Blocks	6	Control Fuses	1
Circuit Breaker	1	Softstart	3
Wiring	1	Primary Fuses	9

Additional Activities

- Programming for SCADA system updates
- Refurbished Windows 95 laptop for programming Westinghouse PLCs
- Worked with contractors on troubleshooting and repairing Sycamore Checkgate communication issues
- Worked with contractors to troubleshoot and repair wellfield soft starters (Sycamore wells 11 and 22)
- Adjusted parameters for North Canal pumpback to allow for proper VFD operation
- Assisted contractors with radio surveying to improve radio communication
- Worked with contractors to run new wires and replace high cutoff and low suction circuitry (N55-P4 and N55-P10)

FORREST FRICK PUMPING PLANT

- 0 AF of water was pumped during the month
- Unit #3 motor and pump repairs are underway

INTERTIE PUMPING PLANT

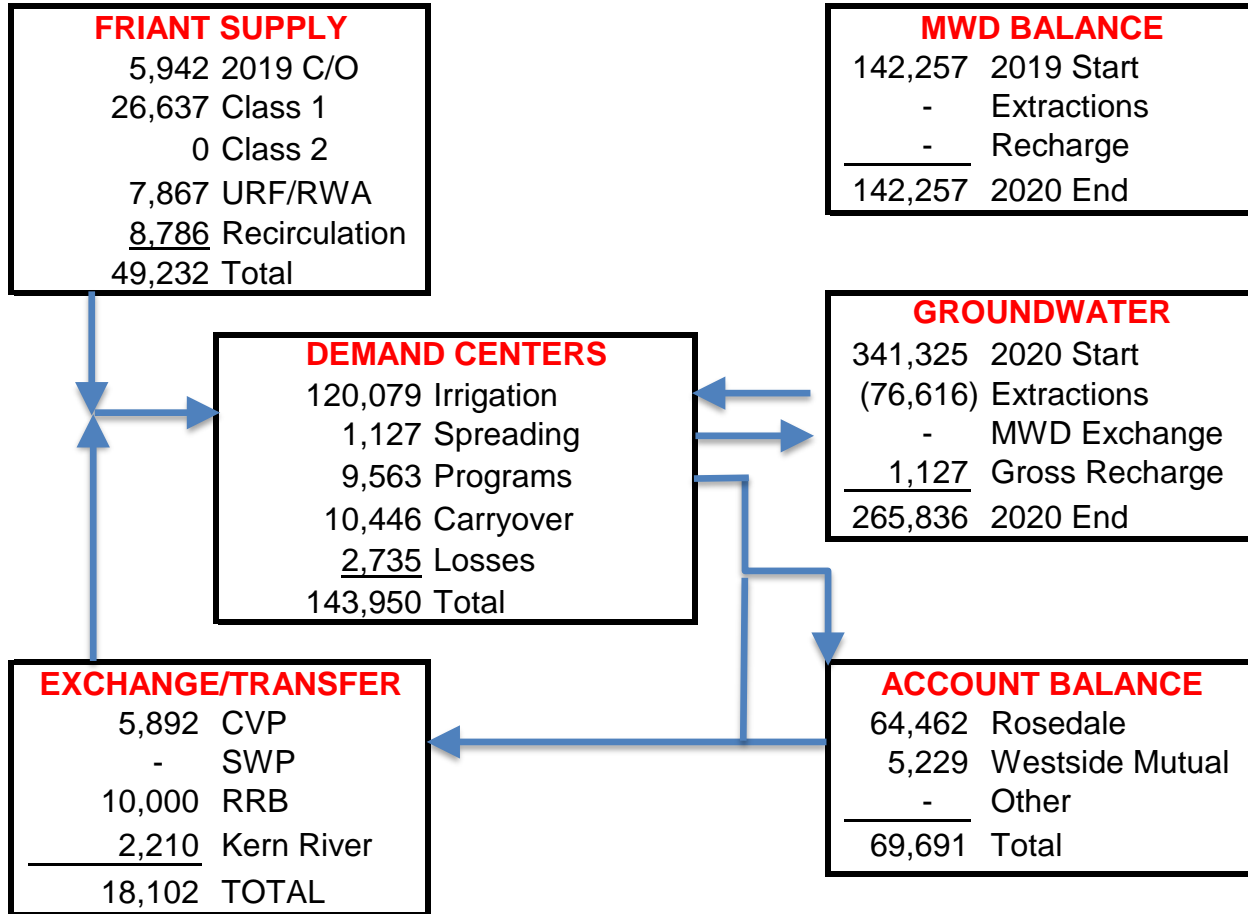
- There was no import (gravity delivery) or export (pumped delivery) of water (0 AF) through the Intertie Pipeline Pumping Plant

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EXHIBIT "A-1"
ARVIN-EDISON WATER STORAGE DISTRICT
2020 WATER SUPPLY AND DEMAND

<u>SUPPLY</u>	<u>AF</u>	<u>%</u>
FRIANT-KERN (F-K)		
65% OF 40,000 AF CLASS 1	26,000	
0% OF 311,675 AF CLASS 2 (Uncontrolled Season)/RWA	0	
0% OF 311,675 AF CLASS 2	0	
CARRYOVER OF 2019 WATER	4,000	
TULARE ID (C/O)	1,500	
MADERA ID (C/O)	442	
DEWATER	637	
SJRRP URF TIER 1 BLOCK 1	0	
SJRRP URF TIER 1 BLOCK 2, 3, 4, AND 5	0	
SJRRP URF TIER 2 BLOCK 1	1,675	
SJRRP URF TIER 2 BLOCK 2	220	
SJRRP URF TIER 2 BLOCK 2	175	
SJRRP PRIORITY URF TIER 2 BLOCK 1	4,690	
SJRRP PRIORITY URF TIER 2 BLOCK 2	617	
SJRRP PRIORITY URF TIER 2 BLOCK 3	490	
ROSEDALE RIO BRAVO WSD	<u>7,205</u>	
SUBTOTAL	47,651	
FRESNO COUNTY	-503	
KERN TULARE	-210	
CHOWCHILLA WD	-2,000	
MADERA ID	<u>-100</u>	
TOTAL F-K	44,838	33.4%
CROSS VALLEY CANAL (CVC)		
RECIRCULATION	1,398	
FRESNO COUNTY	600	
SAUCELITO ID	710	
FRIANT FOUR (LC, HV, TV, GWD)	224	
PIXLEY ID	1,275	
CHOWCHILLA WD	1,846	
SHAFTER-WASCO ID (RECIRC)	1,746	
SLR 2019 CARRYOVER	5,642	
ROSEDALE RIO BRAVO WSD	1,949	
SAN LUIS WD	1,150	
DEL PUERTO WD/ BUENA VISTA WSD	-6,750	
CITY OF LINDSAY	87	
LOSSES	<u>-234</u>	
TOTAL CVC	9,643	7.2%
STATE WATER PROJECT (AQUEDUCT)		
KT EXCHANGE	<u>0</u>	
TOTAL AQUEDUCT	0	0.0%
INTERTIE PIPELINE (IPL)		
FLOOD EMERGENCY RETURN	<u>0</u>	
TOTAL IPL	0	0.0%
KERN RIVER		
FRESNO COUNTY	0	
MWD BANKING	0	
CITY OF BAKERSFIELD	0	
KERN DELTA (WHEELING EXCHANGE)	<u>0</u>	
TOTAL IPL	0	0.0%
INTAKE CANAL PUMP-IN (IC)		
KERN DELTA WELLS (RRB EXCHANGE)	846	
KERN DELTA H STREET	0	
BUENA VISTA WD (SJRRP EX)	2,000	
KERN TULARE WD/ WESTSIDE MUTUAL	<u>210</u>	
TOTAL KR	3,056	2.3%
TOTAL IMPORT	57,537	42.9%
GROUNDWATER PUMPING		
IRRIGATION DEMAND	76,616	
FARM PUMP IN	0	
RETURN TO MWD	<u>0</u>	
TOTAL PUMPING	76,616	57.1%
TOTAL WATER SUPPLY	134,153	100.0%
DEMAND		
IRRIGATION DEMAND (MARCH-JANUARY)	118,988	88.7%
IRRIGATION DEMAND (FEBRUARY)	1,100	0.8%
SPREADING (MARCH-JANUARY)	1,118	0.8%
SPREADING (FEBRUARY)	0	0.0%
RETURN TO MWD	0	0.0%
WHEELING	0	0.0%
CARRYOVER TO 2021	10,446	7.8%
LOSSES/METERING INACCURACIES	<u>2,501</u>	1.9%
TOTAL DEMAND	134,153	100.0%

Exhibit "A-2"
 ARVIN-EDISON WATER STORAGE DISTRICT
2020 WATER MANAGEMENT



Surface Water	44,590	37%
Groundwater (47% of Max)	76,616	63%
Projected Irrigation Demand	121,206	100%

EXHIBIT "B"

ARVIN-EDISON WATER STORAGE DISTRICT

2020 WATER YEAR DELIVERIES

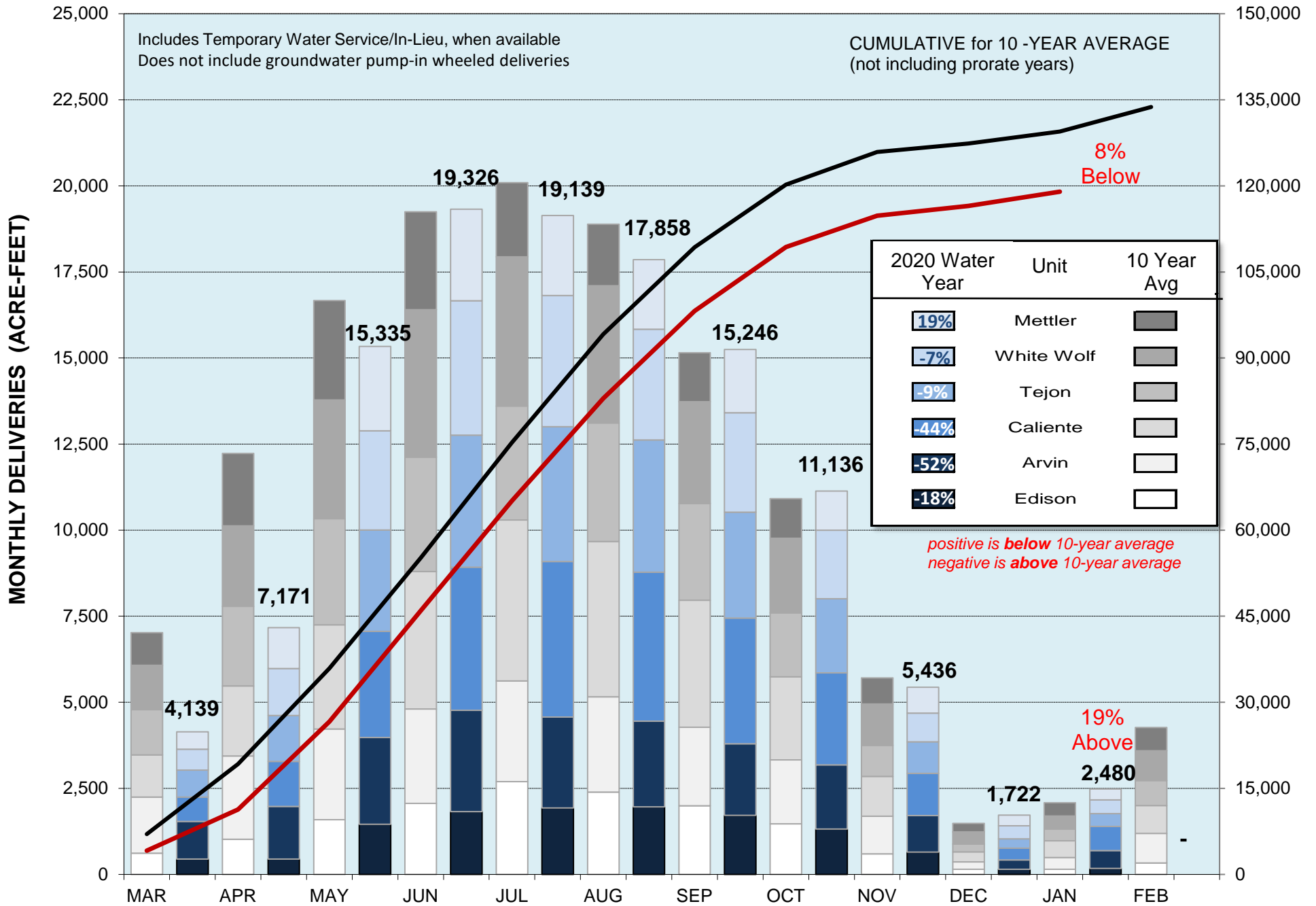


EXHIBIT "C1"
ARVIN-EDISON WATER STORAGE DISTRICT
WATER SUPPLY WATER QUALITY SUMMARY

	Date	Flow cfs	Import Source	Calcium		Magnesium		Sodium		Bicarbonate		Chloride		Nitrate		TDS mg/l	pH	EC umhos/cm	Hardness mg/l	SAR	Gypsum lbs/AF	Boron mg/l	Turbidity NTU
				mg/l	me/l	mg/l	me/l	mg/l	me/l	mg/l	me/l	mg/l	me/l	mg/l	me/l								
Intake Canal	01/11/21	0	RESIDUAL FKC(100%)	13.0	0.65	0.7	0.06	5.6	0.24	52	0.85	3.3	0.09	0.46	0.01	52	8.3	101	36	0.4	0.53	0.02	9.2
	12/10/20	0	RESIDUAL FKC(100%)	10.0	0.50	0.6	0.05	4.1	0.18	37	0.61	2.8	0.08	0.94	0.02	40	7.5	85	28	0.3	0.21	0.02	4.5
	11/05/20	15	RESIDUAL CVC(100%)	27.0	1.35	1.7	0.14	29.0	1.25	89	1.46	21.0	0.59	1.80	0.03	150	8.7	258	75	1.5	0.63	0.12	2.4
	10/09/20	50	CVC(100%)	23.0	1.15	1.2	0.10	31.0	1.34	81	1.33	26.0	0.73	4.80	0.08	150	8.4	286	63	1.7	0.79	0.12	1.5
	09/10/20	200	FKC(100%)	6.1	0.31	0.7	0.05	6.9	0.30	30	0.49	3.2	0.09	1.40	0.02	38	7.2	64	18	0.7	0.55	0.02	3.0
	08/11/20	230	FKC(74%)/CVC(9%)/Kern River(17%)	19.0	0.95	2.2	0.18	19.0	0.82	68	1.11	9.1	0.26	2.30	0.04	98	7.7	176	55	1.1	0.02	0.05	2.9
	07/09/20	200	FKC(100%)	12.0	0.60	1.2	0.10	12.0	0.52	42	0.69	8.6	0.24	3.00	0.05	67	7.4	130	36	0.9	ND	0.04	1.9
	06/05/20	120	FKC(71%)/CVC(29%)	21.0	1.05	1.9	0.16	17.0	0.73	66	1.08	14.0	0.39	5.90	0.10	110	7.8	206	59	1.0	ND	0.02	3.9
	05/08/20	108	FKC(93%)/KD WELLS(7%)	25.0	1.25	2.1	0.17	29.0	1.25	83	1.36	23.0	0.65	8.00	0.13	160	8.0	295	71	1.5	ND	0.04	8.9
	04/13/20	0	RESIDUAL FKC(100%)	18.0	0.90	1.9	0.16	23.0	0.99	76	1.25	19.0	0.53	0.55	0.01	120	7.9	227	53	1.4	0.81	0.10	6.8
	03/13/20	0	FKC(100%)	22.0	1.10	4.3	0.35	41.0	1.77	65	1.07	47.0	1.32	3.00	0.05	190	9.0	357	71	2.1	ND	0.10	8.2
	02/10/20	80	FKC(100%)	3.6	0.18	0.7	0.05	3.5	0.15	18	0.30	1.3	0.04	0.16	0.00	20	6.9	32	12	0.4	0.29	ND	2.9
	01/14/20	0	FKC(100%)	5.9	0.30	0.7	0.06	4.0	0.17	25	0.41	1.1	0.03	0.74	0.01	27	6.8	45	18	0.4	0.24	ND	4.2
	12/06/19	0	CVC(100%)	19.0	0.95	11.0	0.90	49.0	2.11	88	1.44	74.0	2.08	0.85	ND	230	8.0	437	94	2.2	ND	0.11	1.9
Average				16.0	0.8	2.2	0.2	19.6	0.8	58.6	1.0	18.1	0.5	2.4	0.0	103.7	7.8	192.9	49.2	1.1	0.5	0.1	4.4
North Canal	01/11/21	14	WELLS(100%)	21.0	1.05	3.9	0.32	36.0	1.55	120	1.97	19.0	0.53	5.60	0.09	160	8.1	302	68	1.9	2.60	0.21	2.4
	12/10/20	0	WELLS(100%)	23.0	1.15	3.4	0.28	60.0	2.59	130	2.13	25.0	0.70	3.80	0.06	220	8.1	423	72	3.1	3.10	0.57	4.2
	11/05/20	48	WELLS(100%)	23.0	1.15	4.1	0.34	50.0	2.16	120	1.97	21.0	0.59	6.20	0.10	200	8.3	343	74	2.4	2.90	0.35	2.0
	10/09/20	48	CVC(29%)/WELLS(71%)	19.0	0.95	3.9	0.32	42.0	1.81	120	1.97	21.0	0.59	6.20	0.10	180	8.2	336	63	2.3	3.30	0.34	1.3
	09/10/20	134	FKC(71%)/WELLS(29%)	18.0	0.90	2.6	0.21	29.0	1.25	73	1.20	12.0	0.34	5.00	0.08	120	7.9	225	56	1.6	0.29	0.20	2.5
	08/11/20	196	FKC(51%)/CVC(6%)/Kern River(12%)/WELLS(31%)	35.0	1.75	7.6	0.62	42.0	1.81	110	1.80	22.0	0.62	15.00	0.24	220	8.0	378	120	1.7	ND	0.22	4.3
	07/09/20	164	FKC(66%)/WELLS(34%)	21.0	1.05	3.2	0.26	31.0	1.34	88	1.44	18.0	0.51	6.70	0.11	150	7.8	279	65	1.6	0.60	0.19	2.1
	06/05/20	106	FKC(24%)/CVC(10%)/WELLS(66%)	24.0	1.20	4.7	0.39	40.0	1.72	110	1.80	24.0	0.67	7.50	0.12	180	8.1	344	78	2.0	1.10	0.26	3.1
	05/08/20	130	FKC(42%)/KD WELLS(3%)/WELLS(55%)	20.0	1.00	4.6	0.38	48.0	2.07	120	1.97	27.0	0.76	4.70	0.08	200	8.1	358	69	2.5	2.80	0.44	2.3
	04/13/20	28	WELLS(100%)	18.0	0.90	4.1	0.34	42.0	1.81	100	1.64	24.0	0.67	1.60	0.03	180	8.7	335	63	2.3	2.70	0.38	3.9
	03/13/20	106	WELLS(100%)	18.0	0.90	3.8	0.31	53.0	2.28	120	1.97	27.0	0.76	2.80	0.05	200	8.6	375	60	3.0	4.40	0.51	3.4
	02/10/20	0	FKC(100%)	4.3	0.22	0.9	0.07	3.7	0.16	23	0.38	1.8	0.05	0.27	0.00	24	6.9	44	14	0.4	0.37	ND	10.1
	01/14/20	0	FKC(100%)	21.0	1.05	8.8	0.72	44.0	1.90	96	1.57	57.0	1.60	ND	ND	200	8.3	366	88	2.0	ND	0.10	7.0
	12/06/19	0	CVC(100%)	19.0	0.95	11.0	0.90	47.0	2.03	88	1.44	70.0	1.97	0.42	0.01	220	8.0	407	93	2.1	ND	0.12	3.8
Average				20.3	1.0	4.8	0.4	40.6	1.7	101.3	1.7	26.3	0.7	5.1	0.1	175.3	8.1	322.5	70.2	2.1	2.2	0.3	3.7
South Canal	01/11/21	10	WELLS(100%)	43.0	2.15	13.0	1.07	48.0	2.07	140	2.30	80.0	2.25	7.40	0.12	290	8.1	546	160	1.7	ND	0.16	1.6
	12/10/20	0	WELLS(100%)	22.0	1.10	3.7	0.30	63.0	2.72	120	1.97	24.0	0.67	2.90	0.05	220	8.6	423	69	3.3	3.40	0.61	1.7
	11/05/20	70	WELLS(100%)	32.0	1.60	7.8	0.64	50.0	2.16	140	2.30	35.0	0.98	9.60	0.15	230	8.1	412	110	2.1	0.16	0.28	1.9
	10/09/20	100	CVC(21%)/WELLS(79%)	30.0	1.50	8.6	0.70	38.0	1.64	140	2.30	34.0	0.96	10.00	0.16	220	8.1	407	110	1.6	0.22	0.16	1.2
	09/10/20	200	FKC(68%)/WELLS(32%)	22.0	1.10	4.1	0.34	30.0	1.29	81	1.33	18.0	0.51	6.60	0.11	140	7.8	250	72	1.5	ND	0.19	3.6
	08/11/20	130	FKC(46%)/CVC(5%)/Kern River(11%)/WELLS(38%)	35.0	1.75	7.5	0.61	58.0	2.50	140	2.30	36.0	1.01	10.00	0.16	260	7.9	430	120	2.3	ND	0.34	1.9
	07/09/20	130	FKC(59%)/WELLS(41%)	25.0	1.25	5.3	0.43	32.0	1.38	98	1.61	25.0	0.70	8.90	0.14	170	7.9	327	84	1.5	ND	0.16	1.5
	06/05/20	140	FKC(17%)/CVC(7%)/WELLS(76%)	31.0	1.55	8.8	0.72	41.0	1.77	140	2.30	34.0	0.96	9.60	0.15	220	8.1	407	110	1.7	ND	0.16	1.7
	05/08/20	160	FKC(32%)/KD WELLS(3%)/WELLS(65%)	25.0	1.25	7.4	0.61	35.0	1.51	130	2.13	44.0	1.24	6.50	0.10	220	8.0	419	93	1.6	1.10	0.19	2.4
	04/13/20	0	WELLS(100%)	17.0	0.85	5.0	0.41	21.0	0.91	75	1.23	17.0	0.48	1.50	0.02	120	8.8	234	64	1.1	0.86	0.07	5.5
	03/13/20	60	WELLS(100%)	16.0	0.80	4.6	0.38	43.0	1.85	62	1.02	29.0	0.81	1.90	0.03	180	9.5	331	58	2.4	3.30	0.35	4.6
	02/10/20	0	FKC(100%)	5.8	0.29	1.6	0.13	6.0	0.26	29	0.48	6.8	0.19	0.26	0.00	42	7.1	67	21	0.6	0.27	ND	7.9
	01/14/20	0	FKC(100%)	21.0	1.05	8.8	0.72	41.0	1.77	90	1.48	52.0	1.46	ND	ND	200	7.8	344	88	1.9	ND	0.08	5.5
	12/06/19	0	CVC(100%)	18.0	0.90	10.0	0.82	44.0	1.90	87	1.43	70.0	1.97	ND	ND	220	8.1	406	87	2.1	ND	0.10	4.2
Average				24.5	1.2	6.9	0.6	39.3	1.7	105.1	1.7	36.1	1.0	6.3	0.1	195.1	8.1	357.3	89.0	1.8	1.3	0.2	3.2

EXHIBIT "C1"
ARVIN-EDISON WATER STORAGE DISTRICT
WATER SUPPLY WATER QUALITY SUMMARY

	Date	Flow ¹ cfs	Import Source	Calcium		Magnesium		Sodium		Bicarbonate		Chloride		Nitrate		TDS mg/l	pH	EC umhos/cm	Hardness mg/l	SAR	Gypsum lbs/AF	Boron mg/l	Turbidity NTU
				mg/l	me/l	mg/l	me/l	mg/l	me/l	mg/l	me/l	mg/l	me/l	mg/l	me/l								
Intertie Pipeline	01/11/21	0	WELLS(100%)	40.0	2.00	12.0	0.98	48.0	2.07	130	2.13	70.0	1.97	23.00	0.37	300	8.2	547	150	1.7	ND	0.15	9.0
	12/10/20	0	WELLS(100%)	30.0	1.50	8.5	0.70	61.0	2.63	110	1.80	58.0	1.63	4.30	0.07	260	8.4	513	110	2.6	ND	0.39	9.4
	11/05/20	0	WELLS(100%)	30.0	1.50	8.6	0.70	41.0	1.77	120	1.97	27.0	0.76	8.70	0.14	200	8.5	362	110	1.7	ND	0.15	1.8
	10/09/20	0	CVC(21%)/WELLS(79%)	30.0	1.50	8.9	0.73	38.0	1.64	120	1.97	38.0	1.07	9.50	0.15	220	8.4	414	110	1.6	ND	0.15	3.9
	09/10/20	0	FKC(68%)/WELLS(32%)	24.0	1.20	4.9	0.40	35.0	1.51	83	1.36	24.0	0.67	6.30	0.10	170	8.5	284	80	1.7	ND	0.20	2.8
	08/11/20	0	FKC(46%)/CVC(5%)/Kern River(11%)/WELLS(38%)	30.0	1.50	8.4	0.69	47.0	2.03	100	1.64	36.0	1.01	9.50	0.15	220	8.4	375	110	2.0	ND	0.17	2.2
	07/09/20	0	FKC(59%)/WELLS(41%)	27.0	1.35	5.7	0.47	35.0	1.51	100	1.64	27.0	0.76	8.40	0.14	180	8.0	340	90	1.6	ND	0.19	1.9
	06/05/20	0	FKC(17%)/CVC(7%)/WELLS(76%)	30.0	1.50	8.4	0.69	43.0	1.85	130	2.13	32.0	0.90	8.50	0.14	210	8.0	392	110	1.8	ND	0.19	1.6
	05/08/20	0	FKC(32%)/KD WELLS(3%)/WELLS(65%)	27.0	1.35	9.3	0.76	34.0	1.47	130	2.13	30.0	0.84	7.30	0.12	200	8.1	380	110	1.4	0.22	0.16	1.8
	04/13/20	0	WELLS(100%)	29.0	1.45	9.3	0.76	36.0	1.55	130	2.13	33.0	0.93	6.20	0.10	210	8.3	390	110	1.5	ND	0.15	5.4
	03/13/20	0	WELLS(100%)	25.0	1.25	7.5	0.61	31.0	1.34	100	1.64	35.0	0.98	4.90	0.08	180	8.6	349	93	1.4	0.03	0.10	5.8
	02/10/20	0	FKC(100%)	22.0	1.10	9.0	0.74	45.0	1.94	54	0.89	52.0	1.46	0.06	0.00	200	9.4	378	92	2.0	ND	0.12	7.3
	01/14/20	0	FKC(100%)	21.0	1.05	7.0	0.57	36.0	1.55	84	1.38	43.0	1.21	0.24	0.00	170	7.6	303	81	1.8	ND	0.07	4.2
	12/06/19	0	CVC(100%)	12.0	0.60	4.9	0.40	22.0	0.95	61	1.00	31.0	0.87	0.19	ND	110	7.5	221	49	1.4	0.08	0.05	4.0
	Average			26.9	1.3	8.0	0.7	39.4	1.7	103.7	1.7	38.3	1.1	6.9	0.1	202.1	8.3	374.9	100.4	1.7	0.1	0.2	4.4

Water Supply Water Quality Note: ¹ Positive flow rate is reverse flow into the District. Where the reported value is ND, the method detection limit is entered.

Water Supply Water Quality Note: ² Reverse flow into the District South Canal (Sycamore check gate was closed).

Water Supply Water Quality Note: ³ Constituent ran past sample hold time.

ND: NONE DETECTED.
 NA: NOT AVAILABLE OR NOT TESTED.

mg/l: MILLIGRAMS PER LITER; SAME AS PARTS PER MILLION (ppm).

me/l: MILLEQUIVALENTS PER LITER; SAME AS EQUIVALENTS PER MILLION (epm).

INTAKE: SAMPLE TAKEN AT COTTONWOOD RD. SOUTH OF PANAMA LANE.
 NORTH: SAMPLE TAKEN DOWNSTREAM OF SYCAMORE CHECK GATE.
 SOUTH: SAMPLE TAKEN DOWNSTREAM OF TEJON CHECK GATE.
 INTERTIE: TERMINUS OF SOUTH CANAL (S93 FOREBAY).

SODIUM: FOR SURFACE IRRIGATION: SAR < 3 IS GOOD. FOR SPRINKLER IRRIGATION: SODIUM < 3 me/l IS GOOD.

NITRATE: NITRATE IN WATER SLIGHTLY REDUCES FERTILIZER REQUIREMENT.

BICARBONATE: BICARBONATE < 1.5 me/l IS SATISFACTORY FOR OVERHEAD SPRINKLERS.

CHLORIDE: FOR SURFACE IRRIGATION CHLORIDE < 4 me/l IS GOOD.

TDS: TDS < 450 IS ACCEPTABLE FOR UNRESTRICTED USE.

GYPSUM: AMOUNT OF CALCIUM SULFATE IN POUNDS PER ACRE-FOOT OF WATER APPLIED. INCREASES WATER PERMEABILITY AND HELPS CORRECT EXCESS SODIUM. INCREASES CLAY FLOCCULATION FOR INCREASING PERMEABILITY.

pH: A MEASURE OF ACIDITY. A pH < 7 IS ACIDIC, pH = 7 IS NEUTRAL, pH > 7 IS BASIC. NORMAL RANGE IS 6.5 - 8.4. A pH > 8 MAY NEED TO BE BUFFERED FOR PESTICIDE APPLICATION. AFFECTS NUTRIENT AVAILABILITY.

EC: ELECTRICAL CONDUCTIVITY. A MEASURE OF WATER SALINITY; SOIL - IN MILLIMHOS PER CENTIMETER (mmho/cm); WATER - MORE OFTEN, IN MICROMHOS PER CENTIMETER (umhos/cm). EC < 700 (umhos/cm) HAS NO RESTRICTIONS FOR AGRICULTURAL USE. EC < 200 (umhos/cm) CAN REDUCE INFILTRATION RATE.

HARDNESS: HARD WATER, INDICATING CALCIUM AND MAGNESIUM, IS BENEFICIAL FOR AGRICULTURE.

SAR: SODIUM ADSORPTION RATIO. A RATIO OF SODIUM TO CALCIUM AND MAGNESIUM. EVALUATE WITH EC.
 SAR = 0 - 3 AND EC > 400 ACCEPTABLE
 SAR = 3 - 6 AND EC > 900 ACCEPTABLE

BORON: BORON < 0.50 mg/l IS SATISFACTORY FOR ALL CROPS. EXCESSIVE BORON IS PHYTOTOXIC (BURNS) TO PLANTS.

EXHIBIT "C-2"
ARVIN-EDISON WATER STORAGE DISTRICT
2021 AQUATIC PEST CONTROL TREATMENTS TO CANALS & SPREADING BASINS

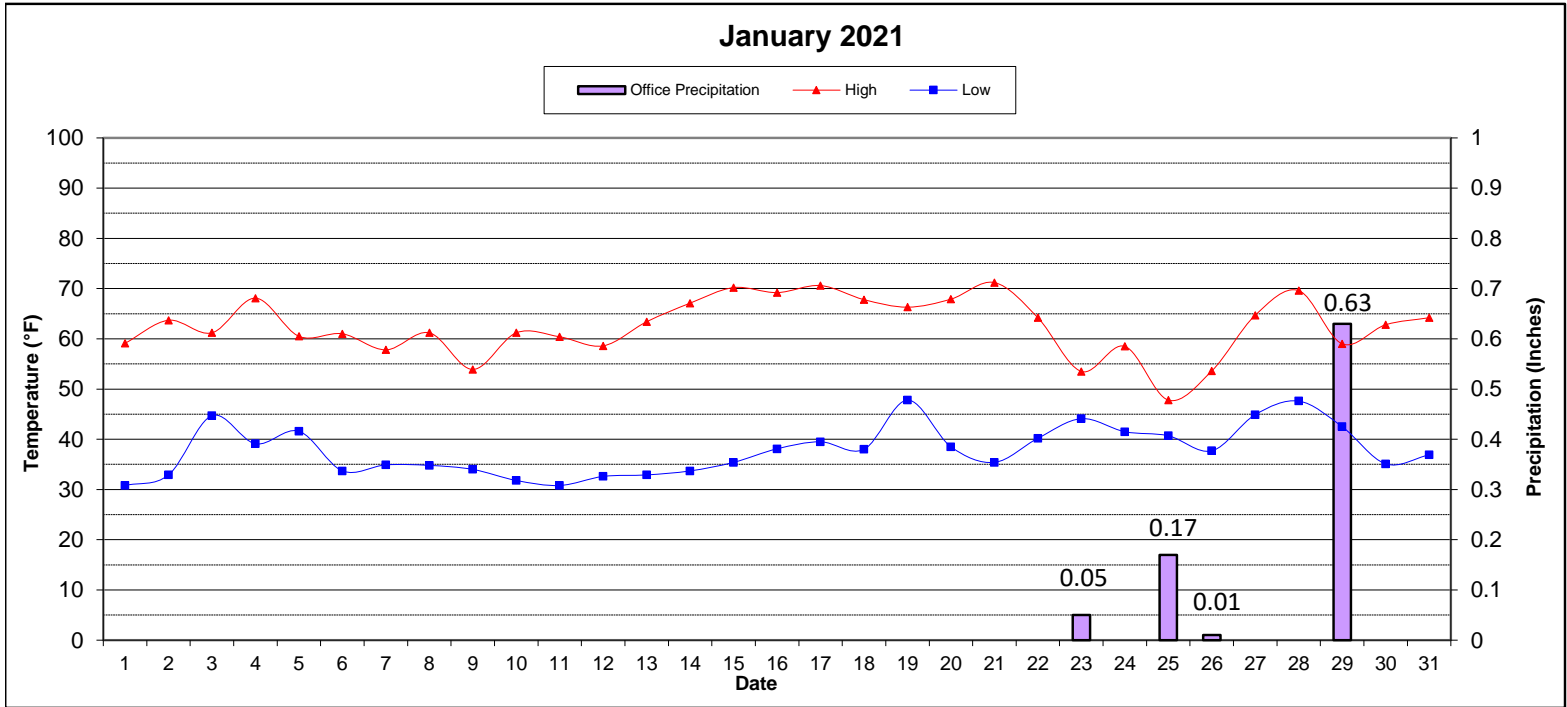
Treatment Weeks (Monday)	Temps	Intake Stine Siphon	North					Syc. Check	PP 32P1	PP 38P1	Tej. Ponds	Tej. Check	615 Check	729 Check	883 Check	Spill Way	Intertie Forbay	
			Bal. Res.	PP 24P1	NCSW	PP 41P1	PP 55P1											Syc. Ponds
		353+87	145+00	237+00	326+50	413+10	546+00	576+50	664+30	291+50	386+30		458+40	615+00	729+10	883+00	885+45	900+27
JAN	01/04/21																	
JAN	01/11/21																	
JAN	01/18/21																	
JAN	01/25/21																	
FEB	02/01/21																	
FEB	02/08/21																	
FEB	02/15/21																	
FEB	02/22/21																	
MAR	03/01/21																	
MAR	03/08/21																	
MAR	03/15/21																	
MAR	03/22/21																	
MAR	03/29/21																	
APR	04/05/21																	
APR	04/12/21																	
APR	04/19/21																	
APR	04/26/21																	
MAY	05/03/21																	
MAY	05/10/21																	
MAY	05/17/21																	
MAY	05/24/21																	
MAY	05/31/21																	
JUNE	06/07/21																	
JUNE	06/14/21																	
JUNE	06/21/21																	
JUNE	06/28/21																	
JUL	07/05/21																	
JUL	07/12/21																	
JUL	07/19/21																	
JUL	07/26/21																	
AUG	08/02/21																	
AUG	08/09/21																	
AUG	08/16/21																	
AUG	08/23/21																	
AUG	08/30/21																	
SEPT	09/06/21																	
SEPT	09/13/21																	
SEPT	09/20/21																	
SEPT	09/27/21																	
OCT	10/04/21																	
OCT	10/11/21																	
OCT	10/18/21																	
OCT	10/25/21																	
NOV	11/01/21																	
NOV	11/08/21																	
NOV	11/15/21																	
NOV	11/22/21																	
NOV	11/29/21																	
DEC	12/06/21																	
DEC	12/13/21																	
DEC	12/20/21																	
DEC	12/27/21																	

2020 Cost To Date	Treatment	Material	Labor	Total
	Captain/Nautique	\$0	\$0	\$0
	Phycomy	\$0	\$0	\$0
	Cascade	\$0	\$0	\$0
	Teton/Hydrothol	\$0	\$0	\$0
	Spreading Basins	\$0	\$0	\$0
Total	\$0	\$0	\$0	

Shaded weeks are actual
 Copper treatment (gal/lbs) for algae and pondweed (injected/broadcast)
 Phycomycin (hydrogen peroxide) treatment (lbs) for algae (broadcast)
 Endothall treatment (gal) for milfoil/basins (injected)
 Endothall treatment (gal) for algae (injected)
 Sonar/Clearcast/RoundUp Custom/MSO (gal)
 Winter Maintenance

Year Type	Amount Spent	Year
Dry	\$399,808	2020
Wet	\$105,928	2019
Normal-Dry	\$235,599	2018
Wet	\$222,685	2017
Normal-Dry	\$186,034	2016
Critical-Low	\$262,734	2015
Critical-High	\$367,563	2014
Dry	\$528,770	2013
Dry	\$504,159	2012
Wet	\$233,449	2011
Normal-Wet	\$24,969	2010
Normal-Wet	\$226,466	2009

EXHIBIT "D"
ARVIN-EDISON WATER STORAGE DISTRICT
SUMMARY OF CLIMATOLOGICAL OBSERVATIONS



PRECIPITATION	BAL RES (1)		OFFICE (2)		SYCAMORE (3)		TEJON (4)		INTERTIE (5)	
	INCHES	% AVG.	INCHES	% AVG.	INCHES	% AVG.	INCHES	% AVG.	INCHES	% AVG.
AVG. MONTHLY	0.82		1.43		1.34		1.15		0.65	
AVG. YEAR TO DATE	3.05		4.13		4.04		3.54		2.57	
CURRENT MONTH	0.88	107%	0.86	60%	0.85	63%	0.08	7%	0.42	65%
CUMULATIVE (07/01/20 - 06/30/21)	1.82	60%	1.87	45%	1.71	42%	0.83	23%	1.05	41%

TEMPERATURE (6)	(°F)	DATE	TIME
MAXIMUM TEMPERATURE	70	1/21/2021	4:00 PM
AVERAGE MAXIMUM TEMPERATURE	63		
# DAYS THIS MONTH ABOVE 100 °F	0		
MINIMUM TEMPERATURE	33	1/1/2021	7:00 AM
AVERAGE MINIMUM TEMPERATURE	38		
# DAYS THIS MONTH BELOW 32 °F	3		

WIND (6)	M.P.H.	DATE	TIME	DRCTN
MAXIMUM WIND SPEED	29.1	1/19/2021	10:00 AM	NE
AVERAGE WIND SPEED	4.0			
AVERAGE WIND SPEED @ 8:00 AM	3.8			

BAROMETRIC PRESSURE (7)	IN. HG	DATE	TIME
AVERAGE PRESSURE @ 8:00 AM	29.65		
MAXIMUM PRESSURE	29.87	1/12/2021	11:00 PM
MINIMUM PRESSURE	29.17	1/19/2021	3:00 AM

NOTES

(1) October 2018 to Present data gathered from District rain gauges
(2) 1975 to Present data gathered from District rain gauges
(3) 1968 to Present data gathered from District rain gauges
(4) 1967 to Present data gathered from District rain gauges
(5) October 2018 to Present data gathered from District rain gauges
(6) Data retrieved from CIMIS (<http://www.cimis.water.ca.gov/WSNReportCriteria.aspx>)
(7) Data retrieved from Weather Underground (<https://www.wunderground.com/us/ca/arvin/zmw:93203.1.99999>)
Precipitation Day is 8:00 AM to 8:00 AM

EXHIBIT "E"
ARVIN-EDISON WATER STORAGE DISTRICT
WY2020 ENERGY CONSUMPTION AND POWER DEMAND

ENERGY CONSUMED - KWH							TOTAL DEMAND - KW						
Month	Forrest Frick PP	Distrib. System	Spreading	Wells	Intertie PP	Total	Forrest Frick PP	Distrib. System	Spreading	Wells	Intertie PP	Total	Load Factor
MAR 20	95,753	1,476,829	16,849	3,881,621	3,823	5,474,875	1,533	10,528	331	12,611	6	25,009	29%
APR	221,449	2,147,169	5,002	5,438,892	3,752	7,816,263	1,875	13,366	167	16,800	6	32,214	34%
MAY	1,089,316	5,057,948	30,062	10,430,220	3,725	16,611,272	3,857	14,586	341	17,217	8	36,009	62%
JUN	1,299,537	5,879,720	15,360	11,414,283	4,064	18,612,964	3,068	14,283	344	17,616	7	35,318	73%
JUL	2,396,936	6,296,885	5,352	7,058,878	4,378	15,762,429	5,018	14,913	247	10,929	7	31,114	68%
AUG	2,198,347	6,072,964	12,514	6,416,516	4,369	14,704,710	5,276	14,553	334	10,664	8	30,835	64%
SEP	2,035,402	5,247,731	8,403	4,498,489	3,786	11,793,811	4,615	14,295	336	7,042	7	26,295	62%
OCT	390,903	3,896,093	12,085	8,364,607	3,897	12,667,585	2,941	13,483	329	14,170	6	30,929	55%
NOV	185,774	1,918,513	2,659	3,664,094	3,477	5,774,518	2,683	11,415	326	14,268	10	28,702	28%
DEC	39,745	709,491	1,148	1,586,220	3,285	2,339,889	829	8,353	64	4,986	6	14,238	22%
JAN 21													
FEB													
TOTAL	9,953,162	38,703,344	109,435	62,753,821	38,555	111,558,315							

Notes: - Since 2005 KW records reflect non-simultaneous demands.
- Energy use for lighting accounts for approximately 90,000 kWh/month at District wellfields and 4,000 kWh/month at the Intertie Pumping Plant

EXHIBIT "F"
 ARVIN-EDISON WATER STORAGE DISTRICT
2020 WATER YEAR WELLFIELD PRODUCTION - AF

Month	Bal Res		North Canal 5		Wellfield						Total		
	AF	% of Historical Max	AF	% of Historical Max	North		Sycamore		Tejon		AF	AF / Day	% of Historical Max
					AF	% of Historical Max	AF	% of Historical Max	AF	% of Historical Max			
MAR - 20	0	0%	964	79%	2,216	101%	783	12%	906	16%	4,869	157	32%
APR	0	0%	752	62%	2,153	96%	1,376	20%	2,263	45%	6,544	218	44%
MAY	0	0%	925	74%	2,936	117%	4,007	55%	4,237	78%	12,105	390	80%
JUN	0	0%	788	65%	2,693	81%	4,206	57%	4,693	85%	12,380	399	76%
JUL	0	0%	639	51%	2,271	67%	2,753	37%	2,070	38%	7,733	249	48%
AUG	0	0%	577	46%	2,883	84%	2,319	32%	1,971	38%	7,750	250	49%
SEP	0	0%	464	38%	2,002	83%	2,228	34%	902	20%	5,596	187	39%
OCT	0	0%	840	67%	3,333	151%	2,864	43%	3,057	67%	10,094	336	69%
NOV	0	0%	376	33%	1,476	71%	1,492	28%	1,039	23%	4,383	146	35%
DEC	0	0%	103	9%	764	37%	596	12%	394	10%	1,857	62	16%
JAN - 21	0	0%	273	22%	847	40%	978	20%	527	11%	2,625	88	21%
FEB													
Total	0		6,701		23,574		23,602		22,059		75,936	207	46%
Ratio	0%		9%		31%		31%		29%		100%	Average	
Wells	4		5		14		34		29		86		
AF/Well	0		1,340		1,684		694		761		883		

EXHIBIT "G"
 ARVIN-EDISON WATER STORAGE DISTRICT
2020 WATER YEAR GROSS SPREADING - AF

Month	Bal Res	North Gravity	North Pressure	Sycamore	Tejon Gravity	Tejon Pressure	Murray Gravity	Landowner Recharge	Subtotal	In-Lieu	Temporary Water	Total
MAR-20	69	251	0	0	0	0	0	0	320	0	0	320
APR	37	0	0	0	0	0	0	0	37	0	0	37
MAY	376	0	0	0	0	0	0	0	376	0	9	385
JUN	47	0	0	0	0	0	0	0	47	0	0	47
JUL	58	0	0	0	0	0	0	0	58	0	0	58
AUG	98	0	0	0	0	0	0	0	98	0	0	98
SEP	75	0	0	0	0	0	0	0	75	0	0	75
OCT	89	0	0	0	0	0	0	0	89	0	0	89
NOV	16	0	0	0	0	0	0	0	16	0	0	16
DEC	2	0	0	0	0	0	0	0	2	0	0	2
JAN-21	0	0	0	0	0	0	0	0	0	0	0	0
FEB												
Total	867	251	0	0	0	0	0	0	1,118	0	9	1,127
Ratio	76.9%	22.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	99.2%	0.0%	0.8%	100%
Ratio	99.2%			0.0%	0.0%		0.0%	0.0%				

Total Pressure	867		0			0			867			867
	100%		0%			0%			100%			100%

EXHIBIT "H-1"
ARVIN-EDISON WATER STORAGE DISTRICT
STATIC VS PUMPING WATER LEVELS IN DISTRICT WELLS - JANUARY 2021
 ALL VALUES IN FEET

	WELL #	STATIC LEVEL	PUMPING LEVEL	BOWL DEPTH	TOTAL DEPTH	DRAW DOWN	BOWL COVERAGE
NORTH CANAL (23)	N1	411	455	610	840	44	155
	N2	422	491	700	840	69	209
	N3	429	459	610	840	30	151
	N4	431	489	550	864	58	61
	N5	437	453	650	864	16	197
	N6	427	522	640	920	95	118
	N7	422	450	600	1010	28	150
	N8	423	465	560	970	42	95
	N9	421	537	700	990	116	164
	N10	396	458	560	990	62	102
	N11	407	430	562	1020	23	132
	N12	412	442	600	1030	30	158
	N13	430	467	600	1000	37	133
	N14	411	429	540	900	18	111
	N15	336	535	700	1200	199	165
	N16	353	462	600	1200	109	138
	N17	340	509	610	1200	169	101
	N18	378	510	610	1190	132	100
	N19	420	456	760	1300	36	304
	N20	426	476	820	1020	50	344
	N21	417	473	660	950	56	188
	N22	385	417	680	990	32	263
	N23	384	435	680	990	51	245
Avg	405	470					

	WELL #	STATIC LEVEL	PUMPING LEVEL	BOWL DEPTH	TOTAL DEPTH	DRAW DOWN	BOWL COVERAGE
TEJON (29)	71	445	491	800	1050	46	309
	72	446	525	800	1045	79	275
	73	445	501	800	1018	56	299
	74	429	501	800	1084	72	299
	75	431	454	800	1045	23	346
	76	426	528	700	996	102	172
	77	430	532	800	1066	102	268
	78	431	482	800	1038	51	318
	79	429	471	700	1032	42	229
	80	411	566	800	996	155	234
	81	392	503	700	925	111	197
	82	411	N/A		996	N/A	N/A
	83	402	562	800	996	160	238
	84	412	449	700	955	37	251
	86	455	522	800	996	67	278
	87	439	489	800	984	50	311
	88	452	501	800	948	49	299
	89	428	488	800	996	60	312
	90	447	516	700	996	69	184
	91	407	N/A	700	996	N/A	N/A
	92	472	534	800	996	62	266
	93	467	578	800	996	111	222
	94	470	542	860	996	72	318
	95	483	513	800	996	30	287
	96	483	550	800	996	67	250
	98	458	509	760	1340	51	251
	99	464	508	760	1340	44	252
	100	425	507	760	1340	82	253
	101	430	509	760	1310	79	251
	Avg	439	513				

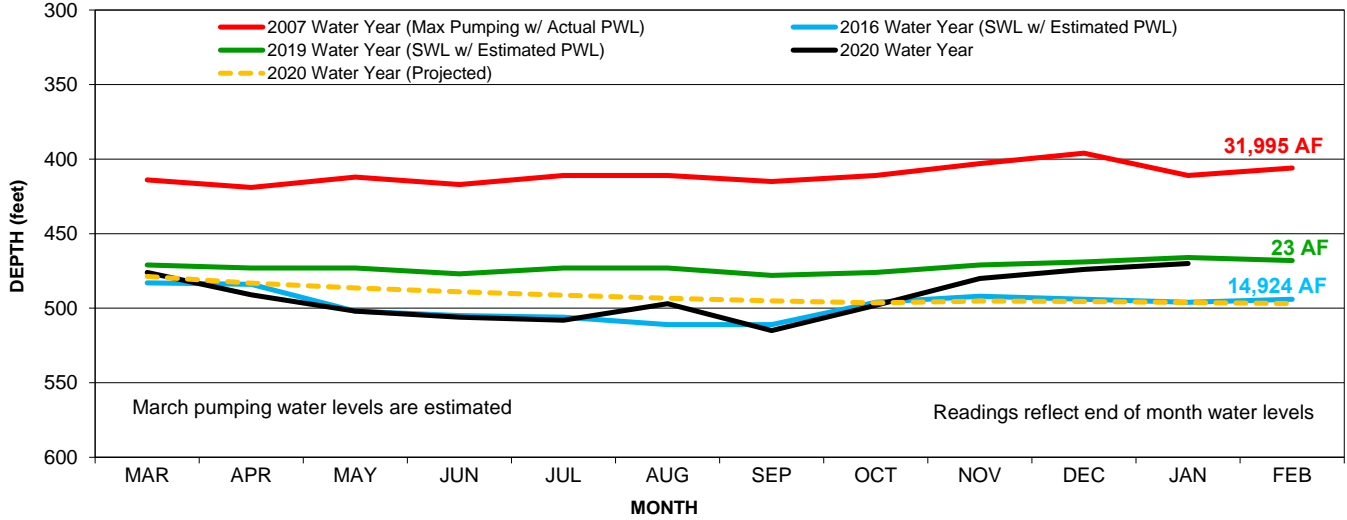
	WELL #	STATIC LEVEL	PUMPING LEVEL	BOWL DEPTH	TOTAL DEPTH	DRAW DOWN	BOWL COVERAGE
SYCAMORE (34)	1	390	429	705	800	39	276
	2	400	439	690	876	39	251
	4	411	439	700	876	28	261
	5	395	420	720	876	25	300
	6	384	446	690	876	62	244
	7	394	443	700	830	49	257
	8	394	431	640	860	37	209
	9	392	422	700	886	30	278
	10	395	423	690	850	28	267
	11	387	419	700	880	32	281
	12	410	452	700	860	42	248
	13	395	430	700	850	35	270
	14	388	427	670	810	39	243
	15	409	483	710	820	74	227
	16	411	506	700	888	95	194
	17	409	427	650	820	18	223
	18	400	423	650	820	23	227
	20	373	419	680	804	46	261
	21	381	418	690	856	37	272
	22	362	376	610	792	14	234
	23	361	375	600	788	14	225
	24	368	393	580	780	25	187
	25	368	386	610	777	18	224
	26	374	402	690	816	28	288
	28	378	429	660	782	51	231
	29	384	400	690	787	16	290
	31	389	410	660	725	21	250
	32	386	469	640	739	83	171
	33	395	469	700	780	74	231
	34	407	N/A	700	781	N/A	N/A
	35	390	457	700	800	67	243
	36	392	415	600	820	23	185
	37	375	398	540	820	23	142
	38	406	441	860	1270	35	419
Avg	390	428					

MONTHLY SUMMARY - AVERAGE WATER LEVELS						
READINGS END OF	STATIC LEVELS			PUMPING LEVELS		
	N. CANAL	SYCAMORE	TEJON	N. CANAL	SYCAMORE	TEJON
JAN-20	398	373	406	466	413	479
FEB	400	364	408	468	404	481
MAR	408	375	405	476	415	484
APR	424	409	443	491	453	522
MAY	432	415	496	502	462	566
JUN	439	422	505	506	478	575
JUL	441	427	495	508	466	569
AUG	440	421	491	479	460	573
SEP	449	435	491	515	474	563
OCT	433	426	489	498	465	562
NOV	415	392	433	480	429	500
DEC	408	391	442	474	429	500
JAN-21	405	390	439	470	428	513
CHANGE TO-DATE	-7	-17	-33	-4	-15	-34

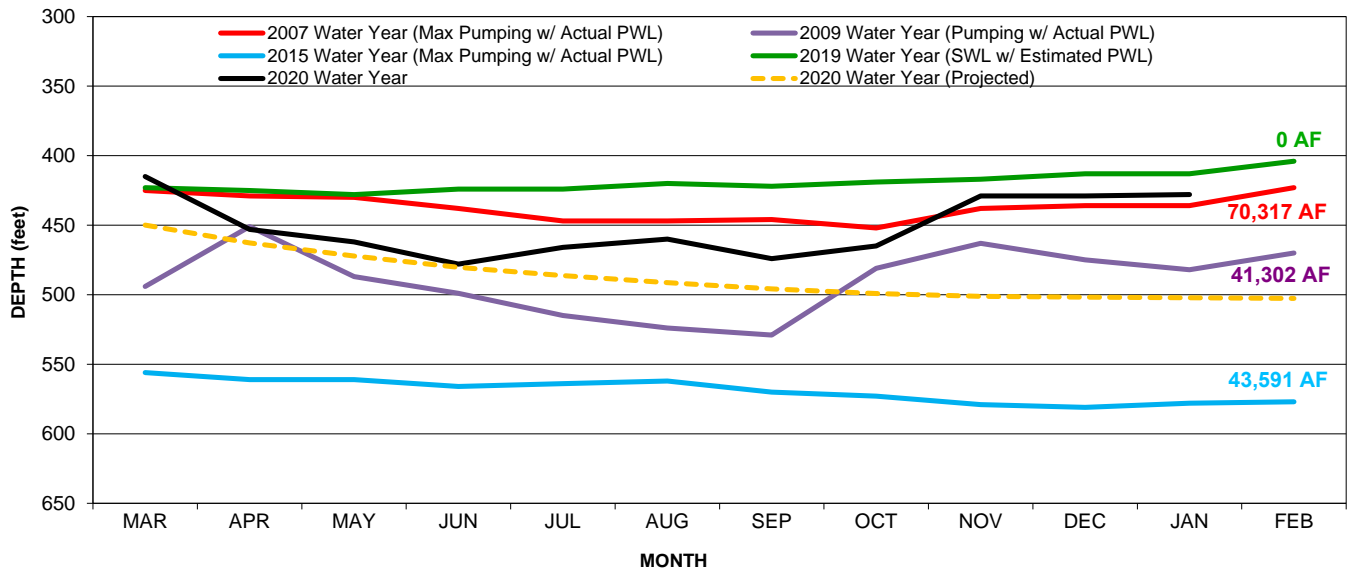
OUT OF SERVICE (4)	*Bowl depth measured to top of pump
AIRLINE FAILURE (5)	*Pumping levels are estimated based on
FAILED (3)	previous draw down records. (6 month average)
86 TOTAL WELLS	*Airline failure levels were obtained with acoustic sounder

EXHIBIT "H-2"
ARVIN-EDISON WATER STORAGE DISTRICT
WELLFIELD PUMPING WATER LEVELS - 2007-09, 2013-16, AND 2018-20

NORTH CANAL



SYCAMORE WELLFIELD



TEJON WELLFIELD

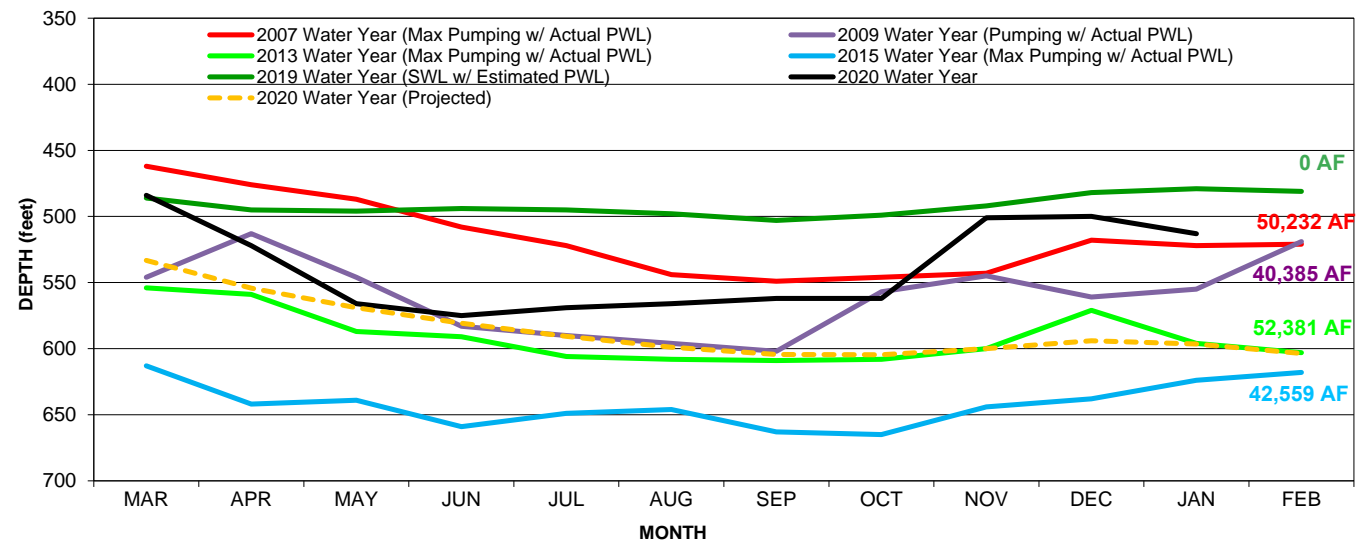



EXHIBIT "I"

January 2021

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	<p>SCC—Red JSM—Blue MD—Orange Staff—Green Board—Brown</p>				<p>1</p> 	2
3	4 JDA (TC)	5 Water Mgmt. Program w/RRBWSD	<p>6 SGMA Update w/EKI</p> <p>FWA/ETGSA & FWA/AE Agreements w/Camp/Kuney</p> <p>123TCP Update w/Kuney (TC)</p> <p>District Issues w/Camp (TC)</p> <p>PWRPA (WebEx)</p>	7	<p>8 Kern Managers (Zoom)</p> <p>Friant Managers (WebEX)</p> <p>FWA Leadership (Camp)</p>	9
10	<p>11 WAKC w/DWR-Karla Nemeth (Zoom)</p> <p>SGMA Update w/EKI (TC)</p>	12 AEWSD BOD (WebEx)	<p>13 Federal Claims w/Young Wooldridge (WebEx)</p> <p>District Issues w/Collup</p>	<p>14 AEWSD Pension Plan Advisory Comm. (TC)</p> <p>Sycamore Solar Project</p>	15 RFG Small Group (TC)	16
17	18 FWA EC w/Camp (WebEx)	19	20 123TCP Update w/Legal Counsel (WebEx)	21	22 RFG Small Group (Microsoft Teams)	23
24	<p>25 FKC WQ Policy w/USBR</p> <p>Low Head Hydro Update</p>	26	<p>27 KGA Prep w/Pascoe</p> <p>KGA BOD w/Pascoe (Zoom)</p> <p>TFRA BOD (TC)</p> <p>WWGSA Ad-Hoc Comm (Microsoft Teams)</p> <p>District Issues w/Giumarra</p>	<p>28 District Issues w/Camp</p> <p>FWA BOD w/Camp (WebEx)</p>	29 WBC (HQ)	30
31			<p>ACWA – Association of California Water Agencies</p> <p>ACSD - Arvin Community Services District</p> <p>BOD - Board of Directors</p> <p>COB - City of Bakersfield</p> <p>CVC - Cross Valley Canal</p> <p>CVPIA - Central Valley Project Improvement Act</p> <p>EC- Executive Committee</p> <p>ETGSA– East Tule Basin GW Sustainability Agency</p> <p>ETFOG - Friant Operational Guidelines</p> <p>FWA - Friant Water Authority</p> <p>GSP - Groundwater Sustainability Plan</p> <p>KGA - Kern Groundwater Authority</p> <p>KC - Kern County</p>	<p>KCWA - Kern County Water Agency</p> <p>KRGSA - Kern River Groundwater Sustainability Agency</p> <p>KRWCA - Kern River Watershed Coalition Authority</p> <p>MAR - Managed Aquifer Recharge</p> <p>MTs - Microsoft Teams</p> <p>MWD - Metropolitan Water District</p> <p>RFG - Restoration Flow Guidelines</p> <p>RWA– Restoration Water Account</p> <p>SJVWIA—San Joaquin Valley Water Infrastructure Authority</p>	<p>SJRRP - San Joaquin River Restoration Program</p> <p>SGMA - Sustainable Groundwater Management Act</p> <p>TF - Temperance Flat Steering Committee</p> <p>TC- Teleconference</p> <p>WAKC - Water Association of Kern County</p> <p>WBC - Wage & Benefit Comm.</p> <p>WRMWSO - Wheeler Ridge-Maricopa Water Storage District</p> <p>WWGSA - White Wolf Groundwater Sustainability</p> <p>WMP - Water Mgmt. Program</p> <p>WQSA - Water Quality Sub-Account</p>	