ARVIN-EDISON WATER STORAGE DISTRICT

REPORT OF DISTRICT OPERATIONS

July 2021

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Employee Anniversary Luncheon was Held to Recognize Various Service Year Awards

WATER SUPPLY

Friant Division Central Valley Project (CVP)

- The 2021 Water Year allocation is as follows:
  - 20% Class 1 (8,000 AF)
  - 0% Class 2
- Exhibit "A" provides additional supply information for 2021 Water Year supplies

San Joaquin River (SJR) Restoration Program (SJRRP)

- The 2021 Runoff Year is estimated at 529,000 AF of natural river runoff in the SJR watershed, which is a "Critical-High" year type pursuant to SJR settlement and accordingly, the SJRRP would receive 70,919 AF of water supply.
- Given a "Critical-High" year and due to low reservoir conditions, a potential call on San Joaquin River to meet Exchange Contractor demands, and other considerations the SJRRP Restoration Flows have been eliminated until September 10th and the remaining volume will be used in the fall to reestablish and reconnect the SJR downstream of Sack Dam (more cold water in fall and assist with low point).
- Given a "Critical-High" year there is likely no Unreleased Restoration Flows and limited Recapture/Recirculation opportunity (additional fall and/or carryover into 2022 supplies to Contractors).
- Provided continued dry conditions, the SJRRP has called on AEWSD's 2016 exchange agreement for 7,000 AF in 2021 and consequently the SJRRP would provide 21,000 AF in return for such exchange.
- 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 (no opportunity in 2021).

Shasta System CVP

- The 2021 allocation for south of Delta Ag remains at 0%

State Water Project (SWP)

- The 2021 Table A allocation remains 5%

Kern River

- 2021 supplies are currently estimated at 16% of average

Water Bank Facilities

- Given limited initial surface supply allocations, heavy reliance on wellfields and previously banked water is expected for the 2021 Water Year (106,800 AF)

Metropolitan Water District (MWD) Program

- MWD beginning balance is 142,257 AF in water bank reserves
- The District obtained its twelfth 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, 2022
- 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 program activity involving surface water supplies and/or groundwater supplies that meet California Aqueduct requirements
- District successfully worked with MWD, DWR, KCWA, Reclamation and Friant Water Authority on an exchange of up to 50,000 AF that involves the AE/MWD Agreement that provides for supplemental water supply in San Luis Reservoir (Friant to MWD for MWD State Water Project) and therefore eliminates the need to release such quantity into the San Joaquin River thereby saving on some losses. This exchange provides for up to 5,000 AF of return subject to the AE/MWD Agreement provisions.

Rosedale-Rio Bravo Water Storage District (RRBWSD) Program

- The District's 2021 beginning account balance for water held in RRBWSD is at 64,462 AF.
- District anticipates receiving 10,000 AF from the program, by exchange with Kern Delta (see below), to supplement other surface water supplies, which would reduce the account to 54,462 AF.
- Districts executed a "2021 Use of CVC/FKC Intertie Agreement" for the RRBWSD-Delano Earlimart banking program.

Kern Delta Water District (KDWD)

- Staff continues meeting with KDWD staff to advance water management opportunities including joint partnership in groundwater recharge facilities and interconnection facilities between Forrest Frick Pumping Plant Discharge Pipeline and the Eastside Canal.
- AEWSD-KDWD-RRBWSD have executed an operational exchange in which AEWSD's 10,000 acre-feet from RRBWSD would be delivered via KDWD from April through September and RRBWSD would deliver 10,000 acre-feet to KDWD (for MWD) from March through December.
- KDWD has initiated advertisement for the Sunset Groundwater Recharge Facility and bids are anticipated in early August.

District Partnerships

- The District has participated in water management programs with the following districts/agencies in Water Year 2021:

Arroyo Pasajero Mutual Water Company
Chowchilla Water District
City of Bakersfield
Fresno County
Garfield Water District
Hills Valley Irrigation District
Ivanhoe irrigation District
Kern Delta Water District
Kern Water Bank
Lewis Creek Water District
Metropolitan Water District
Rosedale-Rio Bravo Water Storage District
San Joaquin River Restoration Program
San Joaquin River Exchange Contractors
Saucelito Irrigation District
Shafter-Wasco Irrigation District
Sun Pacific Farming Cooperative
Tejon Ranch Corp
Tri-Valley Water District
Westlands Water District
Westside Mutual Water Company

WATER DEMAND

- Staff continues to implement the Prorate Program of 1.6 AF/AC (May through September period) and continue to coordinate with Landowners in regards to the Prorate Program (irrigation schedules, re-allocation pools, and pump-in request)

- District surface water deliveries for the month were 15,513 AF (22% below average)
- The following is a summary of surface water deliveries for July 2021:

	July 2021		Year to Date	
	Historical	2021 WY	Historical	2021 WY
Turnout Deliveries	19,948	15,513	75,242	68,602
In-Lieu Deliveries	-	-	-	-
Temporary Water	-	-		
Spreading	-	204	-	999
Total	19,948	15,717	75,242	69,601

- Exhibit “B” illustrates the delivery data
- The month's peak daily in-District demand was 372 cfs, which occurred on the 28th
- Exhibit "C-1” details Canal Water Quality information
- Exhibit “C-2” presents the Aquatic Pest Control Treatments ($309,459) for Calendar Year 2021

GENERAL

- On the 30th, staff held a luncheon to recognize multiple employee anniversaries that did not receive Board recognition due to COVID-19 restriction.

- Staff/consultants completed the Proposition 218 election (passed with 93% approval)

- Staff continued investigations regarding increasing cybersecurity and met with consultants to discuss the results of the cyber audit

- Staff continues to practice several safety measures in response to COVID-19

- District vehicles consumed an estimated 4,600 gallons of fuel during the month (average fuel efficiency of 11.0 mpg)
- There were 294 hours lost due to illness (including COVID-19 hours) and 11 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 Water Year 2021 is expected to generate an electrical demand of approximately 150 million kilowatt hours
- Exhibit “I” list various meetings for Directors, management and engineering staff

ENGINEERING DEPARTMENT ACTIVITIES

Pre-bid Meeting for Sunset Groundwater Recharge Facility (Earthwork Contract)

Replacing Burnt 3 Phase Connections for Construction Water (Sunset GW Recharge Facility Well)

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 (facilities, water service areas, boundaries, etc.)
- 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

Grants & Funding Opportunity Updates

- 2015 USBR Water Conservation Grant administration (Groundwater Metering Project)
    - Final performance and validation report was submitted
- District **was awarded** 2020 USBR WaterSMART grant application for the Forrest Frick Pipeline/ Eastside Canal Intertie at $500,000 (with a $500,000 local cost share) and a grant contract is anticipated in November upon completion of the cultural portion for the NEPA Categorical Exclusion
- 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 and accounting of on-going water management programs
- Technical support and review of ongoing projects/studies such as:
    - Sunset Spreading Works (w/Kern Delta WD)
        - Basin design was finalized
        - Public bids for the earthwork will be due August 6th
        - Investigating power options (PG&E vs. various PWRPA rates)

- Forrest Frick and Eastside Canal Intertie (w/ Kern Delta WD)
  - Working the USBR on grant agreement and environmental compliance
  - Easement review
  - Draft O&M agreement submitted to Kern Delta for review
- Potential Interconnections (w/ Wheeler Ridge-Maricopa WSD)
  - Easement review
  - Pipeline extension and outlet design (S73-P4 to 850 Canal)
- Groundwater Service Area System Expansion CEQA Planning
  - The Mitigated Negative Declaration has been completed and filed.
  - P&P drafting 30% design scope of work for remaining pipeline segments
- Pump Replacement Program
  - Received delivery of 5 cfs (4 of 4), 10 cfs (4 of 4), and 20 cfs (7 of 7) pumps
  - Staff has installed 2-5 cfs units, 0-10 cfs units and 3-20 cfs units and remaining units are anticipated in August
- Turnout modification requests
  - Canopy Ag (E-29) reconciliation
- Temporary and/or In-Lieu Water Service Contract Requests
  - Sunview
  - TechAg
  - Moore
- Surface Water Service Area relocation request
  - Moore (Caliente Unit)
- Landowner pipeline replacement (adjacent to and within Sycamore Spreading)
- Cathodic protection system upgrades
  - FFPP discharge pipeline
- Pump Efficiency Testing
  - District wide testing in progress
  - As needed for replaced pumps
- Real Time Water Quality Monitoring
  - Remote connection for data access and website display is in progress
- CIMIS Station
  - Coordinated landline to cellular conversion with Department of Water Resources (installation pending)
- Intertie Pipeline Inspection
  - Reviewing alternate inspection methods that do not require a drained pipeline
- Standtank Painting
  - Coordinate inspection and labor compliance services
  - Painting completed in July
- Assessment of Reasonable Water Requirement report
  - Draft report received, staff review in progress

SGMA Activities

- Continued coordination meetings and outreach activities

        - White Wolf GSA Workshop #3
    - Attended various GSA meetings
    - Coordinated GSA boundary revisions with neighboring agencies
        - Pending Kern Groundwater Authority review
    - Development of a potential Well Mitigation Policy
    - Evaluate various Water Budget methodologies
    - Entered water level data into the new County wide Data Management System (DMS)
    - Spring survey completed for subsidence network

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
    - Shell Oil (Intake Canal)
    - Quad Knopf development (Intake Canal)
    - Highspeed Rail Authority
    - Don Nelson (North Canal)
- Reviewing/responding to multiple planning notices
    - Kern County (various developments/potential facility conflicts)
    - Kern County “water availability” letter on two (2) proposed developments in Edison area (1 in GWSA and 1 in SWSA)
- Reviewed/responded to environmental documents, as necessary

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
    - Contract demand analysis
- 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)
    - Initiated discussions with planned solar project (Edison area) and awaiting microgrid proposal
- Coordinate long term power analysis and wellsite energizing for Sunset GW Recharge Facility
- Calendar Year and Water Year power reconciliations and summaries
- Groundwater Service Program
    - Monthly invoicing and program coordination

SPREADING WORKS OPERATIONS (WELLFIELDS AND BASINS)

- Exhibit “F” summarizes wellfield production, which totaled 13,926 AF for the month (86% of historical maximum in July)
- Exhibit “G” summarizes gross direct spreading of 204 AF for the month due to wellfield regulation (328 AF was wellfield production was regulated back into the distribution system)
- 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:

Field	Well #	Year	HP	Reason	Work
Balancing Reservoir	16	2006	300	Low Production and Shaft Seized	Pulled equipment, video, replacement pump ordered
Sycamore	17	1967	300	Excess Vibrations	Pulled and inspected equipment, replacement pump ordered
Sycamore	13	1967	300	Low Production and Excess Vibrations	Equipment scheduled to be pulled
Tejon	95	1998	300	Low Production and Excess Vibrations	Equipment scheduled to be pulled
Tejon	90	1970	300	Excess Vibrations	Pulled and inspected equipment, replacement pump ordered
Tejon	80	1970	300	Excess Vibrations	Pulled and inspected equipment, video pending

***Back in Service**

- Eight (8) out of 86, or 9%, of District wells are currently out of service and consultants are reviewing repair options
    - Two (2) long-term failures in Sycamore 34 and Tejon 91
    - Six (6) see above table
- Well Replacement Program
    - Tejon Spreading Works coordination with PG&E to troubleshoot power issues continues

OPERATIONS DEPARTMENT ACTIVITES

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 turnout valve operators
        - Maintained weed control (pumping plants, turnouts, air vents, and isolation valves)
        - Changed lights and panel bulbs (as needed)
        - 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 Interties, Wells, Turnouts, and Pumping Plants (power)

Replacing Bypass Valve Actuator (Pumping Plant N1-P8)

Replacing Bypass Valve Transducer (Pumping Plant N1-P8)

Additional Activities

- Continued maximum wellfield operations
- Water use patrol (District wide)
- Worked on developing a Unit Chief training guidebook
- Clear out turnout base isolation valves (North and South side)
- Investigate and address excessive operating head conditions at pumping plants (N1-P4, N1-P8, and N55-P13)
- Reset displaced concrete rings (air vents and isolation valves)
- Replaced leaking ball valves (North and South side turnouts)
- Cleaned and inspected ball valves, risers, and bushings (North and South Pump Plants)
- Replaced well meters (North Canal Well 21)
- Replaced turnout meters (E-97, C-07, C-72, C-81, C-100, and M-36)
- Replaced turnout valve operators (C-112 and W-A)
- Replaced pumping plant pressure gauge (S32-P1)

- Replaced Worcester bypass valve actuator and pressure transducer (N1-P8)
- Responded to various Pumping Plant alarms (reset and primed laterals)
- Stenciled turnouts, well discharge pipes, and meter concrete rings with labels (as needed)

Underground Service Alert (USA) Report

- District initiated 0
- Responded to 111 USA notices to locate District underground facilities
  - 16 required markings of District facilities
  - 32 were renewals
  - 63 with no conflicts

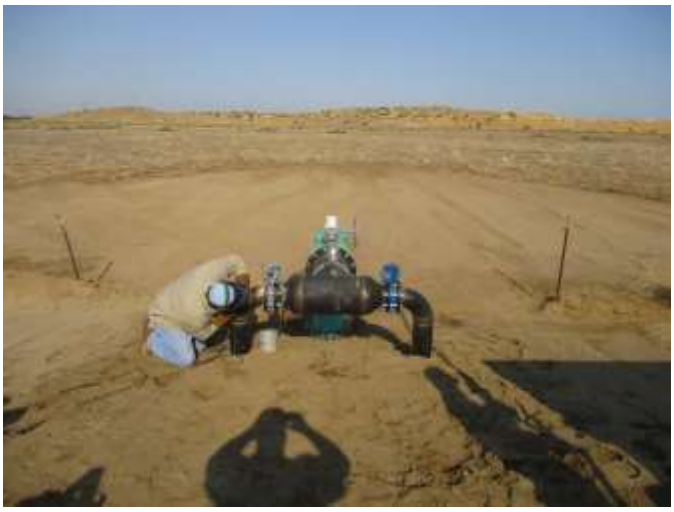
Power Outages and/or Interruptions Involving the Following Systems

- Laterals N1, North Canal Spreading Works, N41, N55, District Office, S32, S64, S73, S93, and Tejon Spreading Works, and End of the Canal

Laterals Prorates (number of days)

- S38 (1)

MAINTENANCE DEPARTMENT ACTIVITIES



Installing New Turnout for Spreading Operations (Caliente 10-acre Land)

Painting Facilities (Pumping Plant N8-P1)

Routine Activities

- Aquatic and terrestrial weed control (Intake Canal)
- Routine gardening and maintenance at Headquarters and CIMIS station
- Fence repair (Intake Canal, Forrest Frick Pumping Plant, North Canal Spreading Works, and Caliente Spreading)
- Grading
- Discing (Wasteway)
- Mowing (North Canal and Sycamore Spreading Works)
- Cleared out forebays (North and South Canal)
- Assisted other Departments as needed (Operations)
- Conducted monthly safety meeting including COVID procedures

Additional Activities

- Continued to remove excessive tumbleweeds, debris and sediment (Sycamore Channel)
- Install remaining 6” pipelines and valves (Caliente Spreading)
- Remove excess dirt buildup and place new rocks (South of District HQ)
- Install new fan (Pumping plant N55-P1)
- Repair pipeline leaks (turnouts C-23 and C024)
- Install two (2) new AC units (North Canal Spreading Works)
- Clear overgrowth (Intake Canal)
- Repair AC units (Motor Control Center at 729 and Controls Shop)
- Wash out condenser coils on AC units (District Wide)
- Clean and setup pump shop for Employee Anniversary Luncheon
- Prepped and painted various facilities and equipment
  - Pumping Plants N8-P1, N8-P2, and N55-P5

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	6	Tail Lights	3
Tires	6	Wiper blades	8
Tire Repairs	3	Cabin Filter	4
Rotors/Drums	4	Trailer Lights	2
Batteries	1	Coolant Cap	1
Fuel Filters	4	Spotlights	1
Belts	1		

- Heavy Equipment Repairs
  - Installed new clutch (Rotary mower)
  - adjusted brakes (Water truck)
  - Repaired gang and installed new bearing (Disc)

PUMP DEPARTMENT ACTIVITIES

New Pump Shop Service Truck

Pump and Motor Replacement (Pumping Plant N8-P1 Unit #5)

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 specifications for Phase 2 (horizontal pumps)
  - Received 15 out of the 15 pumps (Phase 1)
- Added oil and installed drip lines to Sunset GW Recharge Facility well for construction water purposes

PUMP & MOTOR REPAIR SUMMARY

	Pumping Plant/Wells	Unit	Size	Time/Hours	Reason
Vertical Pumps	N8-P1	5	5 CFS	35,917	Worn Bearings
	Pumback 883	2	50 CFS	20,232	Worn Shaft, Excessive Vibrations
Vertical Motors	N8-P1	1	100 HP	35,917	Burnt Windings
	N8-P1	5	100 HP	18,939	Burnt Windings
Horizontal Pumps	S93-P3	2	10 CFS	5,222	Worn Bearings and Sleeves
Horizontal Motors	N55-P2	5	200 HP	14,493	Burnt Windings

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
Motor Starter	1	Trip Unit	1
Contactor	1	PLC Modules	5
Contact Block	3	Limitorque	1
Circuit Breaker	2	Relay	1
Hour Meters	5	Fuses	3

Additional Activities

- Programming for SCADA and radio system updates and monitored performance
- Prepared control panel and worked with contractors to replace 3 phase connectors for Sunset GW Recharge Facility well for construction water purposes
- Worked with contractors to replace faulty floor breaker (Pumping Plant N55-P1)

FORREST FRICK PUMPING PLANT

Pump Removal for Repairs (FFPP Unit #7)

Pump and Motor Installation After Repairs (FFPP Unit #3)

- 2,225 AF of water was pumped during the month
- Unit #3 motor and pump were installed after repairs and startup is anticipated in August
- Unit #7 pump was removed for repairs due to excessive vibrations
- Consultants are designing reverse flow facilities into the Intake Canal to assist in regulating wellfield production during shoulder months to increase peaking water supplies

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

2021 WATER SUPPLY AND DEMAND

SUPPLY		***AF***	***%***
FRIANT-KERN (F-K)			
20% OF 40,000 AF CLASS 1		8,000	
0% OF 311,675 AF CLASS 2 (Uncontrolled Season)/RWA		0	
0% OF 311,675 AF CLASS 2		0	
SUPPLEMENTAL WATER		5,000	
CARRYOVER OF 2020 WATER		7,611	
SHAFTER-WASCO ID		174	
	SUBTOTAL	20,785	
FRESNO COUNTY		-600	
GARFIELD WD		-61	
HILLS VALLEY ID		-22	
TRI VALLEY WD		-7	
LEWIS CREEK WD		-21	
SAUCELITO ID		-346	
IVANHOE ID		-200	
SJRRP RETURN		-7,000	
	TOTAL F-K	12,528	9.8%
CROSS VALLEY CANAL (CVC)			
RETURN TO MWD		-5,000	
RECIRCULATION (WESTLANDS)		-2,603	
WESTSIDE MWC/KWB		1,503	
TEJON RANCH/ARROYO PASAJERO		1,990	
KERN DELTA H ST (RRBWSD EXCHANGE)		4,437	
SLR 2020 CARRYOVER		2,603	
	TOTAL CVC	2,930	2.3%
STATE WATER PROJECT (AQUEDUCT)			
KT EXCHANGE		0	
	TOTAL AQUEDUCT	0	0.0%
INTERTIE PIPELINE (IPL)			
FLOOD EMERGENCY RETURN		0	
	TOTAL IPL	0	0.0%
KERN RIVER			
FRESNO COUNTY		0	
MWD BANKING		0	
KERN DELTA H ST (RRBWSD EXCHANGE)		5,563	
	TOTAL IPL	5,563	4.4%
INTAKE CANAL PUMP-IN (IC)			
KERN DELTA WELLS		0	
KERN DELTA H STREET		0	
	TOTAL KR	0	0.0%
TOTAL IMPORT		**21,021**	**16.4%**
GROUNDWATER PUMPING			
IRRIGATION DEMAND		106,784	
FARM PUMP IN		0	
RETURN TO MWD		0	
	TOTAL PUMPING	106,784	83.6%
TOTAL WATER SUPPLY		127,805	100.0%

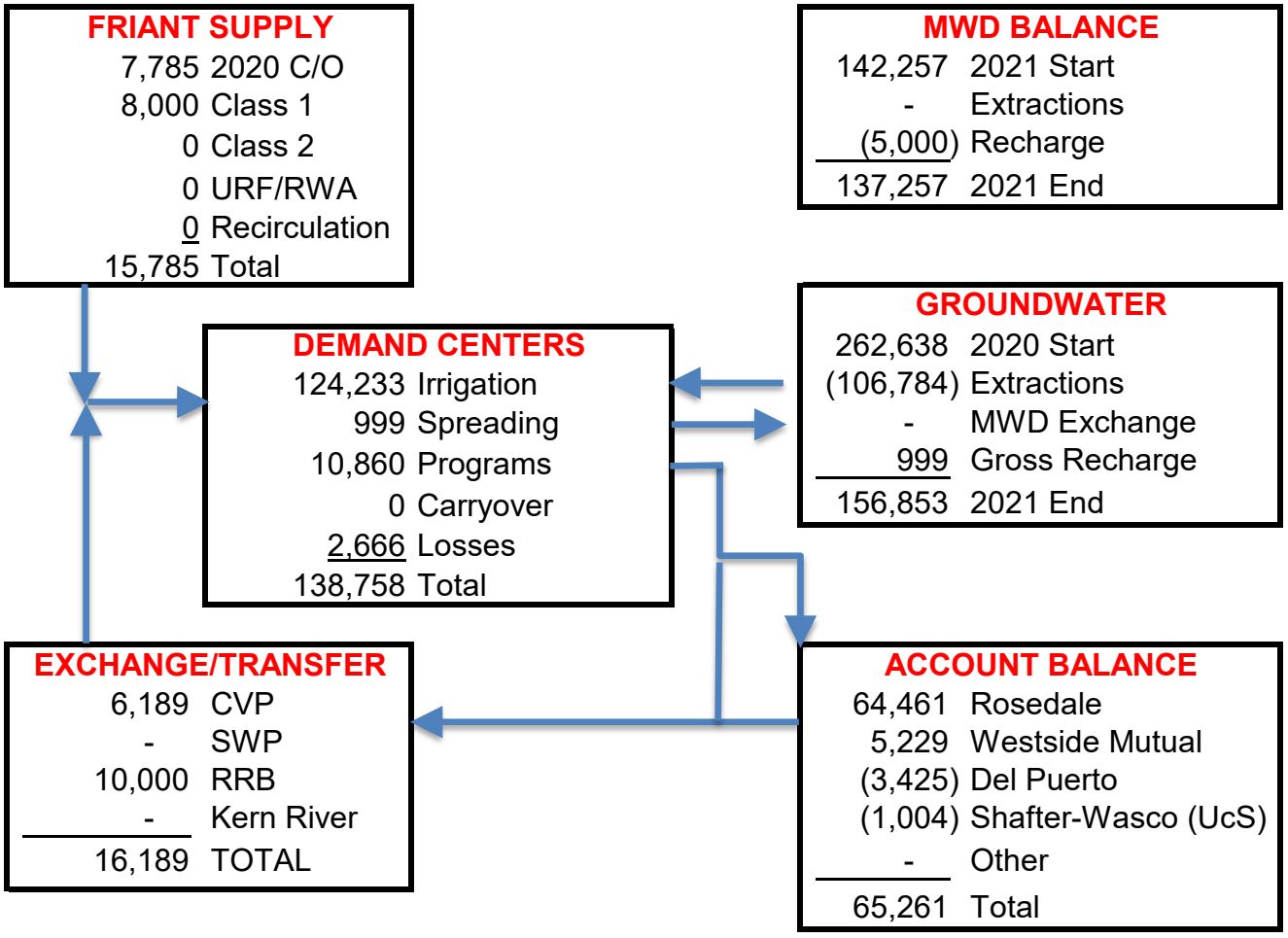
DEMAND		
IRRIGATION DEMAND (MARCH-JULY)	68,602	53.7%
IRRIGATION DEMAND (AUGUST-FEBRUARY)	55,631	43.5%
SPREADING (MARCH-JULY)	999	0.8%
SPREADING (AUGUST-FEBRUARY)	0	0.0%
RETURN TO MWD	0	0.0%
WHEELING	0	0.0%
CARRYOVER TO 2022	0	0.0%
LOSSES/METERING INACCURACIES	2,573	2.0%
TOTAL DEMAND	127,805	100.0%

8/5/2021

Exhibit "A-2"

ARVIN-EDISON WATER STORAGE DISTRICT

2021 WATER MANAGEMENT



Surface Water	18,448	**15%**
Groundwater (66% of Max)	106,784	**85%**
Projected Irrigation Demand	125,232	**100%**

EXHIBIT "B"

ARVIN-EDISON WATER STORAGE DISTRICT

2021 WATER YEAR DELIVERIES

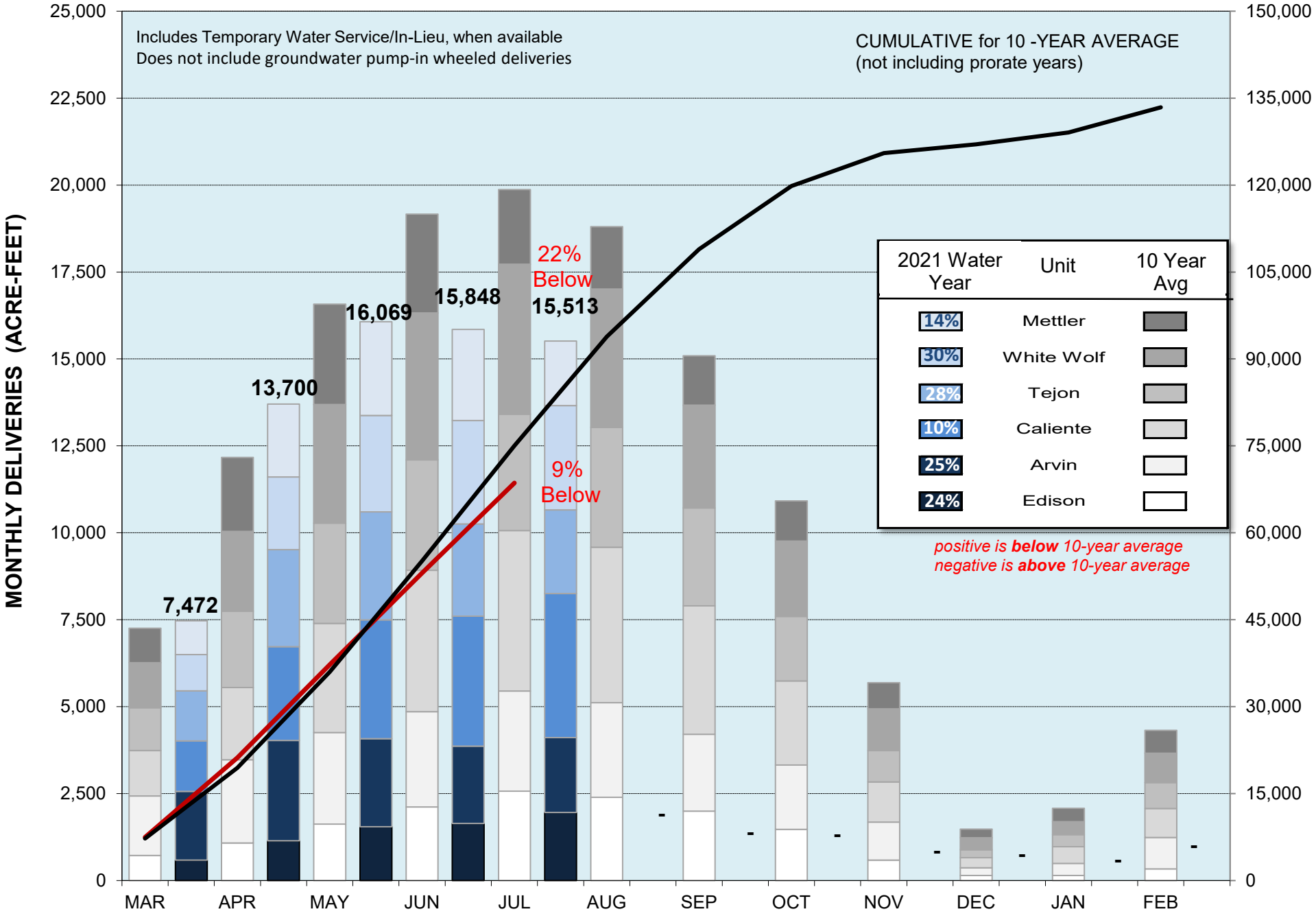


EXHIBIT "C1"

ARVIN-EDISON WATER STORAGE DISTRICT

WATER SUPPLY WATER QUALITY SUMMARY

	Date	Flow	Import	Calcium		Magnesium		Sodium		Bicarbonate		Chloride		Nitrate		TDS	pH	EC	Hardness	SAR	Gypsum	Boron	Turbidity
		cfs	Source	mg/l	me/l	mg/l	me/l	mg/l	me/l	mg/l	me/l	mg/l	me/l	mg/l	me/l	mg/l		umhos/cm	mg/l		lbs/AF	mg/l	NTU
Intake Canal	07/08/21	35	Kern River(56%)/KD WELLS(44%)	27.0	1.35	2.8	0.23	27.0	1.16	110	1.80	18.0	0.51	5.10	0.08	150	8.3	298	80	1.3	0.97	0.12	2.6
	06/04/21	110	FKC(68%)/Kern River(18%)/KD WELLS(14%)	22.0	1.10	2.3	0.19	24.0	1.03	80	1.31	16.0	0.45	4.20	0.07	130	8.6	244	66	1.3	0.62	0.11	2.8
	05/07/21	35	KD WELLS & KD MAIN(100%)	27.0	1.35	4.2	0.34	25.0	1.08	96	1.57	12.0	0.34	3.80	0.06	150	8.7	274	84	1.2	0.42	0.15	4.0
	04/07/21	27	KD WELLS & KD MAIN(100%)	24.0	1.20	3.3	0.27	24.0	1.03	91	1.49	12.0	0.34	2.20	0.04	130	8.6	243	73	1.2	0.76	0.18	5.0
	03/12/21	0	RESIDUAL CVC(100%)	22.0	1.10	1.5	0.12	32.0	1.38	78	1.28	21.0	0.59	0.99	0.02	140	8.7	263	62	1.8	1.10	0.17	9.4
	02/11/21	22	CVC(100%)	24.0	1.20	1.3	0.11	9.1	0.39	74	1.21	4.7	0.13	2.10	0.03	87	8.6	162	64	0.5	0.33	0.04	16.8
	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
	Average			**19.8**	**1.0**	**1.8**	**0.1**	**19.0**	**0.8**	**71.0**	**1.2**	**12.3**	**0.3**	**2.8**	**0.0**	**106.6**	**8.2**	**199.3**	**57.1**	**1.1**	**0.6**	**0.1**	**5.0**
North Canal	07/08/21	58	Kern River(10%)/KD WELLS(8%)/WELLS(82%)	19.0	0.95	3.8	0.31	43.0	1.85	130	2.13	19.0	0.53	8.20	0.13	180	8.3	335	63	2.4	3.40	0.26	1.9
	06/04/21	148	FKC(27%)/Kern River(7%)/KD WELLS(6%)/WELLS(60%)	21.0	1.05	4.1	0.34	52.0	2.24	130	2.13	25.0	0.70	10.00	0.16	210	8.4	378	68	2.8	3.50	0.41	4.4
	05/07/21	58	KD WELLS & KD MAIN(18%)/WELLS(82%)	22.0	1.10	4.5	0.37	35.0	1.51	120	1.97	16.0	0.45	7.60	0.12	160	8.2	297	73	1.8	2.00	0.14	1.2
	04/07/21	80	KD WELLS & KD MAIN(14%)/WELLS(86%)	20.0	1.00	4.3	0.35	34.0	1.47	110	1.80	17.0	0.48	5.50	0.09	150	8.3	274	68	1.8	1.90	0.16	2.4
	03/12/21	58	WELLS(100%)	22.0	1.10	3.9	0.32	40.0	1.72	120	1.97	17.0	0.48	7.00	0.11	170	8.2	303	70	2.1	2.20	0.19	1.2
	02/11/21	14	CVC(21%)/WELLS(79%)	23.0	1.15	4.5	0.37	27.0	1.16	110	1.80	16.0	0.45	6.90	0.11	140	8.2	261	75	1.3	0.97	0.07	1.3
	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
	Average			**22.2**	**1.1**	**4.2**	**0.3**	**40.1**	**1.7**	**113.6**	**1.9**	**19.4**	**0.5**	**7.2**	**0.1**	**174.3**	**8.1**	**319.9**	**72.4**	**2.1**	**2.1**	**0.3**	**2.4**
South Canal	07/08/21	90	Kern River(7%)/KD WELLS(6%)/WELLS(87%)	31.0	1.55	8.7	0.71	41.0	1.77	140	2.30	37.0	1.04	11.00	0.18	230	8.2	440	110	1.7	0.27	0.16	1.5
	06/04/21	160	FKC(21%)/Kern River(5%)/KD WELLS(4%)/WELLS(70%)	27.0	1.35	7.4	0.61	46.0	1.98	140	2.30	35.0	0.98	10.00	0.16	220	8.2	4	98	2.0	1.40	0.25	4.9
	05/07/21	120	KD WELLS & KD MAIN(12%)/WELLS(88%)	34.0	1.70	9.7	0.80	40.0	1.72	140	2.30	37.0	1.04	9.70	0.16	230	8.1	420	120	1.6	ND	0.12	1.0
	04/07/21	140	KD WELLS & KD MAIN(9%)/WELLS(91%)	32.0	1.60	9.0	0.74	39.0	1.68	140	2.30	32.0	0.90	9.00	0.15	210	8.2	381	120	1.6	ND	0.15	1.6
	03/12/21	50	WELLS(100%)	33.0	1.65	8.5	0.70	40.0	1.72	140	2.30	35.0	0.98	11.00	0.18	220	8.2	403	120	1.6	ND	0.18	2.2
	02/11/21	20	CVC(18%)/WELLS(82%)	35.0	1.75	9.1	0.75	38.0	1.64	120	1.97	37.0	1.04	15.00	0.24	220	8.4	410	120	1.5	ND	0.11	1.6
	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
	Average			**30.9**	**1.5**	**7.9**	**0.7**	**43.1**	**1.9**	**129.9**	**2.1**	**35.6**	**1.0**	**9.3**	**0.2**	**220.0**	**8.1**	**375.7**	**108.8**	**1.8**	**1.1**	**0.2**	**2.0**

EXHIBIT "C1"

ARVIN-EDISON WATER STORAGE DISTRICT

WATER SUPPLY WATER QUALITY SUMMARY

	Date	Flow[1]	Import	Calcium		Magnesium		Sodium		Bicarbonate		Chloride		Nitrate		TDS	pH	EC	Hardness	SAR	Gypsum	Boron	Turbidity
		cfs	Source	mg/l	me/l	mg/l	me/l	mg/l	me/l	mg/l	me/l	mg/l	me/l	mg/l	me/l	mg/l		umhos/cm	mg/l		lbs/AF	mg/l	NTU
Intertie Pipeline	07/08/21	0	Kern River(7%)/KD WELLS(6%)/WELLS(87%)	32.0	1.60	9.9	0.81	43.0	1.85	150	2.46	40.0	1.12	11.00	0.18	240	8.3	453	120	1.7	0.04	0.17	1.8
	06/04/21	0	FKC(21%)/Kern River(5%)/KD WELLS(4%)/WELLS(70%)	28.0	1.40	8.6	0.70	42.0	1.81	130	2.13	35.0	0.98	9.70	0.16	220	8.3	411	110	1.8	0.58	0.19	7.0
	05/07/21	0	KD WELLS & KD MAIN(12%)/WELLS(88%)	36.0	1.80	11.0	0.90	40.0	1.72	150	2.46	38.0	1.07	11.00	0.18	240	8.1	439	130	1.5	ND	0.13	3.4
	04/07/21	0	KD WELLS & KD MAIN(9%)/WELLS(91%)	36.0	1.80	12.0	0.98	41.0	1.77	150	2.46	39.0	1.10	10.00	0.16	240	8.3	431	140	1.5	ND	0.15	4.1
	03/12/21	0	WELLS(100%)	32.0	1.60	9.1	0.75	42.0	1.81	120	1.97	35.0	0.98	11.00	0.18	220	8.5	406	120	1.7	ND	0.16	3.6
	02/11/21	0	CVC(18%)/WELLS(82%)	33.0	1.65	8.9	0.73	50.0	2.16	120	1.97	48.0	1.35	10.00	0.16	240	8.3	448	120	2.0	ND	0.23	3.9
	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
	Average			**31.3**	**1.6**	**8.9**	**0.7**	**43.3**	**1.9**	**122.4**	**2.0**	**39.1**	**1.1**	**10.1**	**0.2**	**225.7**	**8.3**	**415.4**	**115.0**	**1.8**	**0.3**	**0.2**	**4.0**

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	North																
			Stine Siphon	Bal. Res.	PP 24P1	NCSW	PP 41P1	PP 55P1	Syc. Ponds	Syc. Check	PP 32P1	PP 38P1	Tej. Ponds	Tej. Check	615 Check	729 Check	883 Check	Spill Way	Intertie Forbay
			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	38-58																	
	01/11/21																		
	01/18/21																		
	01/25/21																		
FEB	02/01/21	36-69																	
	02/08/21																		
	02/15/21																		
	02/22/21																		
	02/22/21																		
MAR	03/01/21	42-68			15	15	15	15	207				15		15				
	03/01/21				1.5	2	2	2	70	9			2	18.5	2				
	03/08/21			145			200							25		14			
	03/08/21			50			65												
	03/15/21													10	10				
	03/15/21												3		6.5	2			
	03/22/21			366.5	20			10	10										
	03/22/21			85.5	91.5	92			21							15			
	03/22/21			30	30	31													
	03/29/21				120	120	10	10	214					10	10				
	03/29/21				40	40	2.5	2.5					12			7			
APR	04/05/21	47-78					20	10					30	10		15			
	04/12/21						5	5	12						5	5			
	04/12/21		17				2.5		2.5	17			25		2.5	17			
	04/19/21												29			15			
	04/26/21							15	15				9		10				
MAY	05/03/21	56-85						275	14	14			20			14			
	05/10/21						5	5	5				14			9			
	05/17/21						212						14			8			
	05/24/21					7	10		12				16		10	7			
	05/24/21						2.5								2.5				
	05/31/21												22		16				
JUN	06/07/21	66-94				20	2.5	33.5	33.5	16			16			12			
	06/14/21					88							23			11			
	06/21/21								11	11	2.5	2.5	19	20	20	11			
	06/28/21					12	2.5	2.5					15	2.5	2.5	7			
	06/28/21						10	10						10	10				
JUL	07/05/21	72-100					2.5	2.5	67	12			12			9			
	07/05/21						10	10											
	07/12/21					14	2.5	2.5	2.5	13			15		2.5	6			
	07/12/21						10	10	10						10				
	07/19/21					2.5	2.5	240	80				11			6			
	07/19/21					10	10												
	07/26/21																		
AUG	08/02/21	60-89																	
	08/09/21																		
	08/16/21																		
	08/23/21																		
	08/30/21																		
SEPT	09/06/21	62-93																	
	09/13/21																		
	09/20/21																		
	09/27/21																		
OCT	10/04/21	46-79																	
	10/11/21																		
	10/18/21																		
	10/25/21																		
NOV	11/01/21	41-71																	
	11/08/21																		
	11/15/21																		
	11/22/21																		
	11/29/21																		
DEC	12/06/21	40-59																	
	12/13/21																		
	12/20/21																		
	12/27/21																		

2021 Cost To Date			
Treatment	Material	Labor	Total
Captain/Nautique	$94,500	$8,336	$102,836
Phycomycin	$15,282	$6,016	$21,298
Cascade	$0	$0	$0
Teton/Hydrothol	$156,157	$29,168	$185,325
Spreading Basins	$0	$0	$0
Total	$265,939	$43,520	$309,459

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)

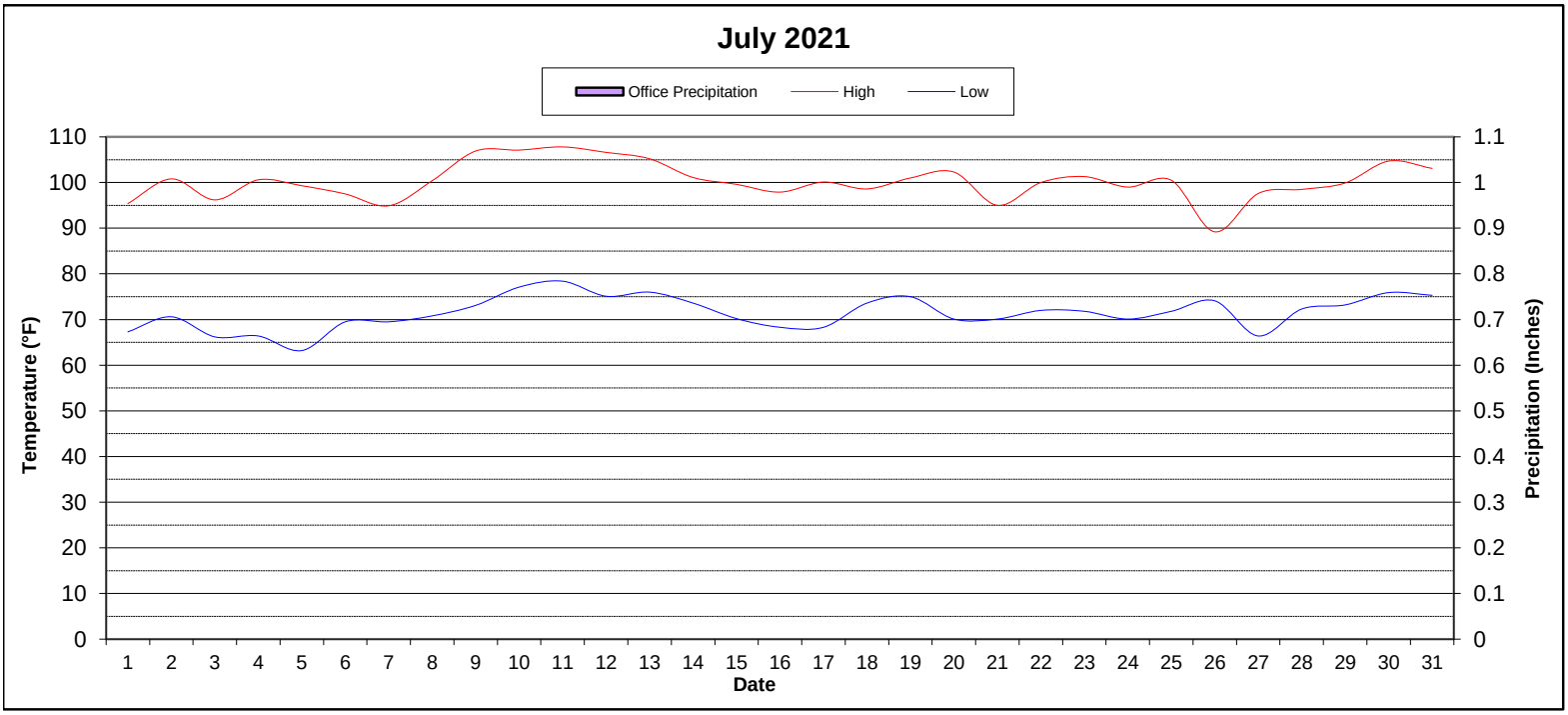
Winter Maintenance

Year Type	Amount	Year
Critical-High	$309,459	2021
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
Normal-Dry	$341,506	2008
Dry	$464,165	2007
Wet	$341,920	2006
Wet	$89,797	2005
Normal-Dry	$65,324	2004
Normal-Dry	$106,107	2003

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	0.00		0.02		0.02		0.02		0.00	
AVG. YEAR TO DATE	0.00		0.02		0.02		0.02		0.00	
CURRENT MONTH	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
CUMULATIVE (07/01/21 - 06/30/22)	0.00	0%	0.00	0%	0.00	0%	0.00	0%	0.00	0%

TEMPERATURE *(6)*	(ºF)	DATE	TIME
MAXIMUM TEMPERATURE	107	7/11/2021	4:00 PM
AVERAGE MAXIMUM TEMPERATURE	100		
# DAYS THIS MONTH ABOVE 100 ºF	16		
MINIMUM TEMPERATURE	65	7/5/2021	5:00 AM
AVERAGE MINIMUM TEMPERATURE	72		
# DAYS THIS MONTH BELOW 32 ºF	0		

WIND *(6)*	M.P.H.	DATE	TIME	DRCTN
MAXIMUM WIND SPEED	8.1	7/21/2021	1:00 AM	SW
AVERAGE WIND SPEED	2.4			
AVERAGE WIND SPEED @ 8:00 AM	1.5			

BAROMETRIC PRESSURE *(7)*	IN. HG	DATE	TIME
AVERAGE PRESSURE @ 8:00 AM	29.40		
MAXIMUM PRESSURE	29.47	7/19/2021	9:00 AM
MINIMUM PRESSURE	29.22	7/1/2021	6:00 PM

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

WY2021 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 21	88,700	2,479,579	14,996	6,161,961	3,553	8,748,789	1,197	12,574	173	15,643	6	29,593	40%
APR	556,206	4,277,014	17,268	10,765,374	3,628	15,619,490	1,578	13,994	322	20,620	6	36,520	59%
MAY	498,414	4,857,866	43,811	13,362,056	4,004	18,766,151	1,883	14,195	785	21,098	6	37,967	66%
JUN	616,755	5,088,519	44,002	13,815,490	4,067	19,568,833	2,285	13,428	783	20,484	7	36,987	73%
JUL													
AUG													
SEP													
OCT													
NOV													
DEC													
JAN 22													
FEB													
TOTAL	1,760,075	16,702,978	120,077	44,104,881	15,251	62,703,263							

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

7/23/2021

EXHIBIT "F"

ARVIN-EDISON WATER STORAGE DISTRICT

2021 WATER YEAR WELLFIELD PRODUCTION - AF

Month	Bal Res		North Canal 5		Wellfield						Total		
					North		Sycamore		Tejon				
	AF	% of Historical Max	AF	% of Historical Max	AF	% of Historical Max	AF	% of Historical Max	AF	% of Historical Max	AF	AF / Day	% of Historical Max
MAR - 21	0	0%	720	59%	2,580	116%	2,327	36%	1,989	36%	7,616	246	49%
APR	0	0%	908	75%	3,051	135%	4,150	60%	4,010	80%	12,119	404	81%
MAY	98	19%	1,071	86%	3,684	125%	4,804	66%	4,593	85%	14,250	475	94%
JUN	188	38%	1,044	86%	3,772	113%	4,814	66%	4,348	79%	14,166	457	87%
JUL	148	18%	1,061	85%	3,800	112%	4,708	63%	4,209	78%	13,926	449	86%
AUG													
SEP													
OCT													
NOV													
DEC													
JAN - 22													
FEB													
Total	434		4,804		16,887		20,803		19,149		62,077	406	80%
Ratio	1%		8%		27%		34%		31%		100%	Average	
Wells	4		5		14		34		29		86		

EXHIBIT "G"

ARVIN-EDISON WATER STORAGE DISTRICT

2021 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-21	138	0	0	0	0	0	0	0	138	0	0	138
APR	109	0	0	0	0	0	0	0	109	0	0	109
MAY	209	0	0	0	0	38	0	0	247	0	0	247
JUN	235	0	0	0	0	66	0	0	301	0	0	301
JUL	204	0	0	0	0	0	0	0	204	0	0	204
AUG												
SEP												
OCT												
NOV												
DEC												
JAN-22												
FEB												
Total	895	0	0	0	0	104	0	0	999	0	0	999
Ratio	89.6%	0.0%	0.0%	0.0%	0.0%	10.4%	0.0%	0.0%	100.0%	0.0%	0.0%	100%
Ratio	89.6%			0.0%	10.4%		0.0%	0.0%				

Total Pressure	895		0			104			999			999
	90%		0%			10%			100%			100%

*NOTES: 1) 481 AF REGULATED IN MAY 3) 328 AF REGULATED IN JULY

2) 382 AF REGULATED IN JUNE

EXHIBIT "H-1"

ARVIN-EDISON WATER STORAGE DISTRICT

STATIC VS PUMPING WATER LEVELS IN DISTRICT WELLS - JULY 2021

ALL VALUES IN FEET

	WELL #	STATIC LEVEL	PUMPING LEVEL	BOWL DEPTH	TOTAL DEPTH	DRAW DOWN	BOWL COVERAGE
NORTH CANAL (23)	N1	425	485	610	840	60	125
	N2	444	545	700	840	102	155
	N3	434	453	610	840	18	157
	N4	435	458	550	864	23	92
	N5	458	465	650	864	7	185
	N6	469	546	640	920	77	94
	N7	478	501	600	1010	23	99
	N8	421	458	560	970	37	102
	N9	453	564	700	990	111	136
	N10	441	513	560	990	72	47
	N11	428	456	562	1020	28	106
	N12	475	501	600	1030	25	99
	N13	478	505	600	1000	28	95
	N14	438	461	540	900	23	79
	N15	395	541	700	1200	146	159
	N16	400	550	600	1200	150	50
	N17	402	508	610	1200	106	102
	N18	305	434	610	1190	129	176
	N19	476	523	760	1300	47	237
	N20	589	628	820	1020	39	192
	N21	460	528	660	950	68	132
	N22	464	485	680	990	21	195
	N23	461	473	680	990	12	207
	Avg	445	504				

	WELL #	STATIC LEVEL	PUMPING LEVEL	BOWL DEPTH	TOTAL DEPTH	DRAW DOWN	BOWL COVERAGE
TEJON (29)	71	585	608	800	1050	23	192
	72	585	613	800	1045	28	187
	73	567	606	800	1018	39	194
	74	544	615	800	1084	72	185
	75	560	592	800	1045	32	208
	76	548	598	700	996	51	102
	77	537	620	800	1066	83	180
	78	537	601	800	1038	65	199
	79	531	573	700	1032	42	127
	80	539	661	800	996	122	139
	81	508	589	700	925	81	111
	82	437	497	800	996	60	303
	83	500	615	800	996	116	185
	84	423	467	700	955	44	233
	86	597	652	800	996	55	148
	87	583	615	800	984	32	185
	88	581	629	800	948	49	171
	89	548	583	800	996	35	217
	90	492	562	700	996	70	138
	91	495	N/A	700	996	N/A	N/A
	92	590	636	800	996	46	164
	93	523	595	800	996	72	205
	94	615	664	860	996	49	196
	95	528	558	800	996	30	242
	96	613	765	800	996	152	35
	98	582	624	760	1340	42	136
	99	580	612	760	1340	32	148
	100	513	552	760	1340	39	208
	101	414	494	760	1310	80	266
	Avg	540	600				

	WELL #	STATIC LEVEL	PUMPING LEVEL	BOWL DEPTH	TOTAL DEPTH	DRAW DOWN	BOWL COVERAGE
SYCAMORE (34)	1	479	529	705	800	51	176
	2	482	558	690	876	76	132
	4	511	552	700	876	42	148
	5	526	565	720	876	39	155
	6	459	533	690	876	74	157
	7	511	575	700	830	65	125
	8	455	504	640	860	49	136
	9	518	571	700	886	53	129
	10	501	547	690	850	46	143
	11	499	557	700	880	58	143
	12	508	567	700	860	59	133
	13	490	538	700	850	49	162
	14	485	575	670	810	90	95
	15	497	655	710	820	157	55
	16	487	642	700	888	155	58
	17	433	592	650	820	159	58
	18	451	505	650	820	53	145
	20	456	500	680	804	44	180
	21	475	512	690	856	37	178
	22	434	485	610	792	51	125
	23	438	491	600	788	53	109
	24	460	508	580	780	49	72
	25	444	476	610	777	32	134
	26	450	514	690	816	65	176
	28	408	510	660	782	102	150
	29	464	563	690	787	99	127
	31	445	528	660	725	83	132
	32	409	594	640	739	185	46
	33	483	594	700	780	111	106
	34	425	N/A	700	781	N/A	N/A
	35	474	554	700	800	81	146
	36	431	457	600	820	26	143
	37	435	458	540	820	23	82
	38	516	539	860	1270	23	321
	Avg	469	541				

MONTHLY SUMMARY - AVERAGE WATER LEVELS

READINGS END OF	STATIC LEVELS N. CANAL	STATIC LEVELS SYCAMORE	STATIC LEVELS TEJON	PUMPING LEVELS N. CANAL	PUMPING LEVELS SYCAMORE	PUMPING LEVELS TEJON
Jul-20	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
FEB	411	405	445	476	443	519
MAR	432	428	469	495	471	549
APR	439	436	479	504	497	564
MAY	439	454	520	506	519	575
JUN	453	464	532	510	532	599
JUL	445	469	540	504	541	600
CHANGE TO-DATE	-4	-42	-45	4	-75	-31

OUT OF SERVICE (6)

AIRLINE FAILURE (8)

FAILED (2)

86 TOTAL WELLS

*Bowl depth measured to top of pump

*Pumping levels are estimated based on previous draw down records. (6 month average)

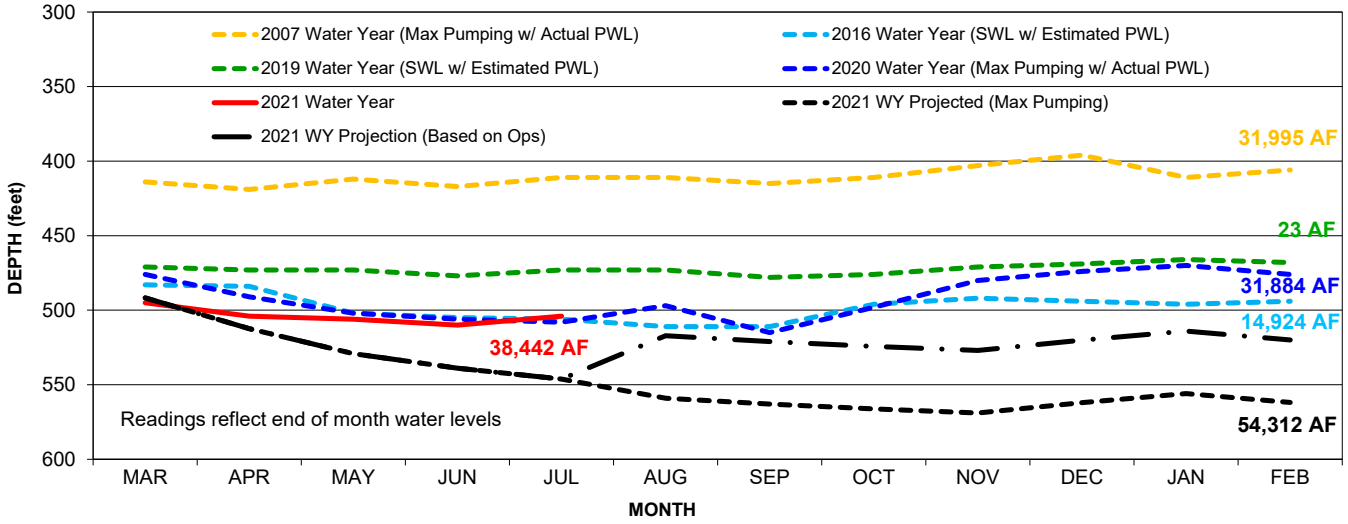
*Airline failure levels were obtained with acoustic sounder

EXHIBIT "H-2"

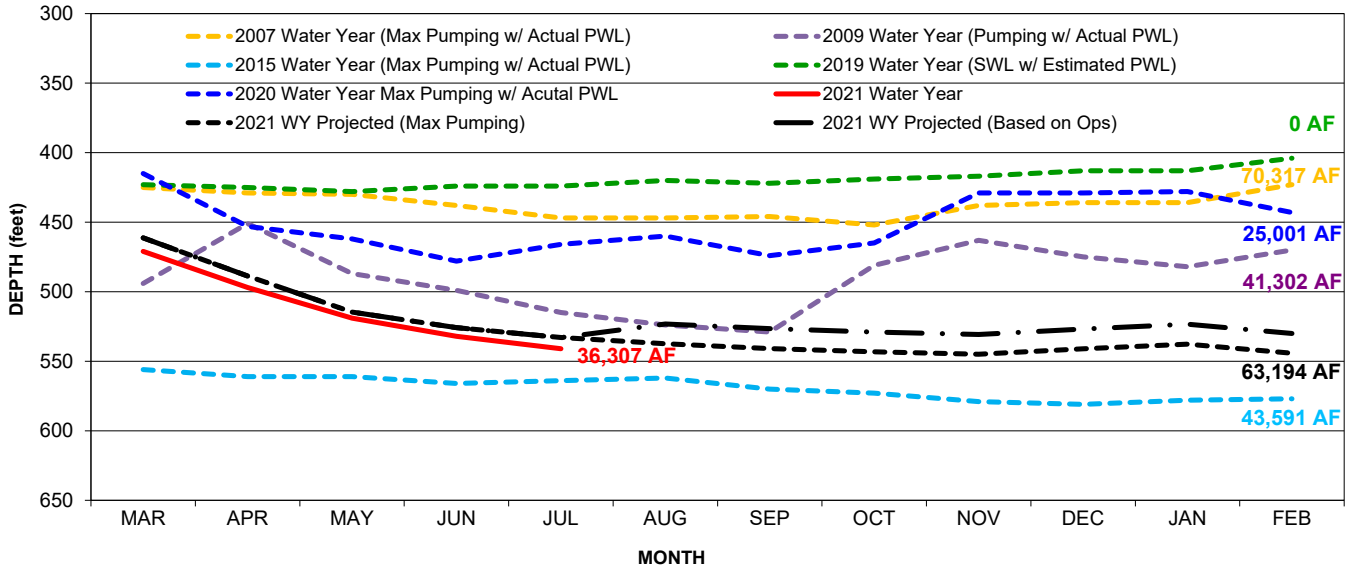
ARVIN-EDISON WATER STORAGE DISTRICT

WELLFIELD PUMPING WATER LEVELS - 2007-09, 2013-16, AND 2018-21

NORTH CANAL



SYCAMORE WELLFIELD



TEJON WELLFIELD

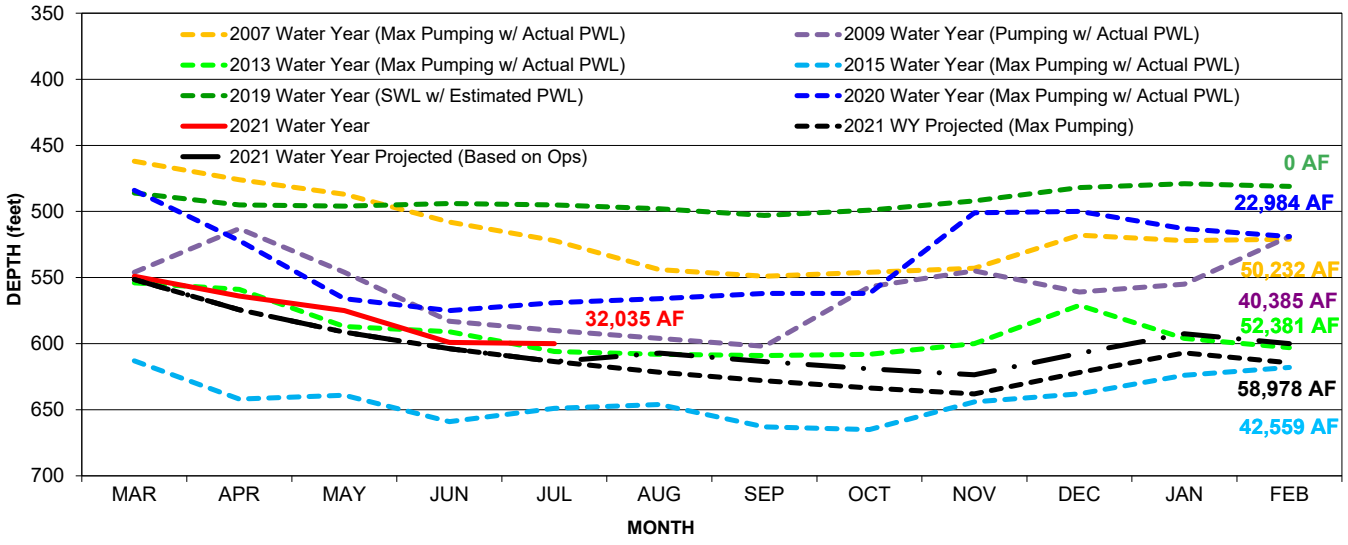


EXHIBIT "I"

July 2021

Sun	Mon	Tue	Wed	Thu	Fri	Sat
JSM—Blue MD—Orange Staff—Green Board—Brown	ACWA –Association of California Water Agencies ACSD - Arvin Community Services District BOD - Board of Directors COB - City of Bakersfield CVC - Cross Valley Canal CVPIA - Central Valley Project Improvement Act EC- Executive Committee ETGSA– East Tule Basin GW Sustainability Agency ETFOG - Friant Operational Guidelines EIR - Environmental Impact Report FWA - Friant Water Authority GSP - Groundwater Sustainability Plan	GTM - GoToMeeting KGA - Kern Grondwater Authority KC - Kern County KCWA - Kern County Water Agency KRGSA - Kern River Groundwater Sustainability Agency KRWCA - Kern River Watershed Coalition Authority MAR - Managed Aquifer Recharge MTs - Microsoft Teams MWD - Metropolitan Water District RFG - Restoration Flow Guidelines RWA– Restoration Water Account	SJVWIA—San Joaquin Valley Water Infrastructure Authority SJRRP - San Joaquin River Restoration Program SGMA - Sustainable Groundwater Management Act TF - Temperance Flat Steering Committee TC- Teleconference WAKC - Water Association of Kern County WBC - Wage & Benefit Comm. WRMWSD - Wheeler Ridge-Maricopa Water Storage District WWGSA - White Wolf Groundwater Sustainability WMP - Water Mgmt. Program WQSA - Water Quality Sub-Account	1 CEQA Doc's w/EKI & Legal Counsel (WebEx) Granite Reservoir District Planning w/ Camp KRWCA BOD w/ Johnston (Microsoft Teams)	2 123 TCP Update (Zoom) Trimark	3
4	5 	6	7 P&P Update Ad-Hoc Interview Committee (Camp, Giumarra, Moore & Johnston) PWRPA BOD (WebEx)	8 ACWA Region 7 Committee (Zoom)	9 Kern Managers (DMS) (Zoom) Friant Managers (Lindsay) Kern Managers (RRBWSD)	10
11	12 Friant w/Phillips & Quinley (Visalia) JDA Prop 218 w/Anthony Vineyards	13 AEWSD BOD AE/MWD Exchange w/ USBR	14	15 WWB Ad-Hoc	16	17
18	19 FWA EC (Camp)	20	21 AE Pension Plan Advisory Comm.	22 Eastside Canal Intertie SJRRP RFG (MTs) KGA Managers	23 Emrgy Low Head Hydro Concept (TC) Cyber Security	24
25	26 Native Yield Study w/ Legal Counsel (TC) FWA Finance Comm (Giumarra) WQ Group w/USBR (MT) WWGSA Workshop w/ Giumarra (Teams) 123 TCP Update (TC) Granite Recharge Project	27 District Issues w/ Camp, Giumarra & Moore AE/MWD Exchange w/ DWR & ACWA (MTs) SJVW Collaborative Action Plan Plenary Group (MTs)	28 KGA Prep & BOD w/Yurosek AE/MWD Exchange w/DWR & KCWA (MTs) SJRRP RFG w/Friant (MTs) Emrgy Low Head Hydro	29 FWA BOD w/Moore	30 Employee Anniversary Luncheon (HQ)	31