ARVIN-EDISON WATER STORAGE DISTRICT

REPORT OF DISTRICT OPERATIONS

December 2022

Pump Replacement at Lateral N55-P2

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WATER SUPPLY

Friant Division Central Valley Project (CVP)

- The 2022 Water Year allocation is 30% which amounts to 12,000 AF.
- Exhibit "A" provides additional supply information for 2022 Water Year supplies.

San Joaquin River (SJR) Restoration Program (SJRRP)

- The 2022 Runoff Year is estimated at 1,072,000 AF of natural river runoff in the SJR watershed, which is a "Normal-Dry" year type pursuant to SJR settlement and accordingly, the SJRRP would receive a 232,470 AF of water supply.
- Given the need to meet San Joaquin River Exchange Contract demands, the SJRRP was reduced to zero in April. However, once this demand was starting to be met by the Delta-Mendota Canal in July, the Restoration Administrated updated its flow recommendation to conserve remaining volume of cold water for fall and winter months. As a result, approximately 101,000 acre-feet is being released as Unreleased Restoration Flows (URF) (see Exhibit A for additional URF supplies).
- District's Recovered Water Account (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.

Shasta System CVP

- The 2022 allocation for south of Delta Ag remains at 0%.

State Water Project (SWP)

- The 2022 Table A allocation remains at 5%.

Kern River

- 2022 supplies are currently estimated at 25% of average.

Water Bank Facilities

- Given limited initial surface supply allocations, heavy reliance on wellfields and previously banked water is expected for the 2022 Water Year (80,000 AF).

Metropolitan Water District (MWD) Program

- MWD beginning balance is 119,127 AF in water bank reserves.
- The District obtained its thirteenth 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 21, 2023.
- 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.

Rosedale-Rio Bravo Water Storage District (RRBWSD) Program

- The District's 2022 beginning account balance for water held in RRBWSD is at 54,461 AF.
- District anticipates receiving 10,000 AF from the program to supplement other surface water supplies.

- Districts executed a “2022 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 executed a 2022 operational exchange in which AEWSD’s 10,000 acre-feet from RRBWSD would be delivered via KDWD from April through September.

District Partnerships

- The District has participated in water management programs with the following districts/agencies in Water Year 2022:

Chowchilla Water District
Del Puerto Water District
Exeter Irrigation District
Fresno County
Ivanhoe Irrigation District
Kern Delta Water District
Kern Water Bank
Lindmore Irrigation District
Lindsay- Strathmore Irrigation District
Orange Cove Irrigation District
Rosedale-Rio Bravo Water Storage District
San Joaquin River Exchange Contractors
San Joaquin River Restoration Program
Saucelito Irrigation District
Shafter-Wasco Irrigation District
Sun Pacific
Tulare Irrigation District
Westside Mutual Water Company

WATER DEMAND

- District surface water deliveries for the month were 430 AF
- The following is a summary of surface water deliveries for December 2022

	December 2022		Year to Date	
	Historical	2022 WY	Historical	2022 WY
Turnout Deliveries	1,479	430	127,567	105,196
In-Lieu Deliveries	-	-	-	-
Temporary Water	-	-		-
Spreading	-	-	-	-
Total	1,479	430	127,567	105,196

- Exhibit “B” illustrates the delivery data
- The month's peak daily in-District demand was 44 cfs, which occurred on the 2nd.
- Exhibit "C-1” details Canal Water Quality information
- Exhibit “C-2” presents the Aquatic Pest Control Treatments ($461,593) for Calendar Year 2022

GENERAL

- District vehicles consumed an estimated 3,454 gallons of fuel during the month (average fuel efficiency of 14 mpg).

- There were 312 hours lost due to illness (including COVID-19 hours) and 160 hours lost due to on-the-job injuries with one (1) employee out on Workers' Compensation Claim

- All Landowners/Water Users were notified of the new rates for Water Year 2023.

- District is experiencing more frequent theft at various District facilities including Headquarters.

- Exhibit "D" highlights precipitation, temperature, and wind speed.

- Exhibit "E" summarizes energy consumption and power demand to date and for Water Year 2022 it is expected to generate an electrical demand of approximately 118 million kilowatt hours.

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 (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

- District **was awarded** 2023 USBR Water Smart grant application for the AEWSD Drought Recovery Wells and Conjunctive Use Modelling Tool Project at $2 million.
- The Forrest Frick Unit In-Lieu Project was recommended by the Department of Water Resources to receive Round 2 Integrated Regional Water Management grant funding. The amount of grant funding has not yet been determined.
- 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 was executed; the NEPA Categorical Exclusion has been completed.
- 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)
- North West Kern Resource Conservation District provides discounted on-farm irrigation distribution uniformity and efficiency testing

- Phone (661) 281-2746
- Website (http://northwestkernrcd.org)

Other Activities

- Administration and accounting of on-going water management programs.
- Technical support and review of ongoing projects/studies such as:
  - Sunset Groundwater Recharge Facility (w/Kern Delta WD).
    - Coordinating power extension (PG&E, contractors, consultants).
    - Pump station and pipeline awarded in September (estimated completion in Spring/Summer 2023).
  - Forrest Frick and Eastside Canal Intertie (w/ Kern Delta WD).
    - Completed environmental compliance with USBR.
    - Working with PG&E on facilities extension for a new service.
    - Bid was awarded to W.M. Lyles Company.
    - Construction began in December.
  - Potential Interconnections (w/ Wheeler Ridge-Maricopa WSD)
    - Coordination with both Districts' staff continued to deliver District water into the 850 Canal, which will ultimately be delivered back into AEWSD overlap lands with Wheeler-Ridge.
  - Pump Replacement Program
    - Staff continues to make progress on Phase 2 of the program.
  - Turnout Modification Requests.
  - Temporary and/or In-Lieu Water Service Contract Requests.
    - AC Foods.
  - Cathodic protection system upgrades.
    - Meeting scheduled with Farwest in January.
  - Pump Efficiency Testing.
    - As needed for replaced pumps.
  - Real Time Water Quality Monitoring.
    - Remote connection for data access completed and website display is in progress.
  - Intertie Pipeline Inspection.
    - Coordinating potential use of pipeline diver tool with Xylem.
  - Groundwater Metering.
    - Coordinate warranty repairs with Manufacturer.
    - Monthly production spreadsheet.t
  - Tejon Spreading Works.
    - Design repair for interbasin structure.

SGMA Activities

- Continued coordination meetings and outreach activities.
- Continued review of well permits.
- Attended various GSA meetings.
- Development of a potential Well Mitigation Policy.
- Coordinate with project proponents regarding County's "Proof of Water" Policy.
- Development of a customized Groundwater Model for AEWSD.
- Continued coordination efforts with South of Kern River GSP (posted on website www.sokrgsp.com).
- Continued coordination efforts with White Wolf Subbasin GSP (posted on website www.whitewolfgsa.org).

- Input data into Data Management System for Fall 2022.
- Beginning work on annual report (2022).

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 to Crimson Pipeline assignment
  - T6712 Block wall near Madison bridge crossing
  - PG&E Overhead crossing (Intake Canal at Madison and Ming)
  - Caltrans Potholing agreement at SR 58
- Reviewing/responding to multiple planning notices
  - Kern County (various developments/potential facility conflicts)
- 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
  - WDT 3 impact review
  - Power accounting report
  - Renewable Portfolio Standards review
- 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 construction coordination
    - Construction was completed waiting on County and PG&E for startup
  - Reviewed available local solar renewable energy certificates to Western Renewable Energy Generation Information System (credits to be used by District/PWRPA)
  - Review and coordinate Demand Response Program
  - MWD power correspondence review
  - District Power Master Planning and Microgrid investigations
  - Forrest Frick Pumping Plant load capacity coordination
- Coordinate long term power analysis for Sunset GW Recharge Facility
- Calendar Year and Water Year power reconciliations and summaries
- Groundwater Service Program
  - Monthly invoicing and program coordination
- Electrical Distribution Expansion (investigations)

SPREADING WORKS OPERATIONS (WELLFIELDS AND BASINS)

- Exhibit “F” summarizes wellfield production, which totaled 540 AF for the month
- 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:

Field	Well #	Year	HP	Reason	Work
Sycamore	2	1967	300	Low Production and Excess Vibrations	Pulled equipment, replacement pump install to be scheduled
Sycamore	17	1967	300	Low Production	Back in Service
Sycamore	21	1970	300	Low Production	Back in Service
Tejon	77	1966	300	Excess Vibrations	Pulled equipment, replacement pump installed
Tejon	78	1966	300	Low Production	Pulled and inspected equipment, pump install to be scheduled
Tejon	83	1970	300	Excess Vibrations	Pulled and inspected equipment, replacement pump installed, startup scheduled
Tejon	95	1998	300	Low Production and Excess Vibrations	Equipment pulled, video, replacement pump install to be scheduled

- Five (5) out of 86 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

OPERATIONS DEPARTMENT ACTIVITES

Routine Activities

- Operate and monitor the District’s water distribution and delivery systems including canals, wells, and reservoirs
- Monthly staff/foremen/safety meetings
- Inspect control systems at pumping plants (transducers, Cla-valves, battery back-ups, etc.)
- Assist personnel in the repair, replacement, and/or maintenance of facilities on an as-needed basis for the following items:
    - Replace flowmeter batteries (turnouts and wells)
    - Flush and clean various turnouts and appurtenances
    - Grease turnout valve operators
    - Maintain weed control (pumping plants, turnouts, air vents, and isolation valves)
    - Change lights and panel bulbs (as needed)
    - Inspect/replace water quality warning labels at turnouts

        - Clean and/or replace air-chamber sight glasses
        - Replace missing locks and chains (canal gates and turnouts)
    - Perform middle of the month and end-of-month meter readings at Interties, Wells, Turnouts, and Pumping Plants (power)

Additional Activities

- Prepared south-side turnouts and operator flanges for Winter Maintenance.
- Drained south-side pumping plants, mainline and sub-laterals for Winter Maintenance
- Dewatered and remove various turnout meters for south-side base isolation valve installments
- Remove, clean and repair risers on north and south pumping plants and tank transducers, air-chamber pressure gauge ports
- Replaced and/or repaired damaged/leaking turnout ball valves and bushings
- Lube and exercise all north and south mainline and sub-lateral air-vents, and gate valves
- Monitored and patrolled Forrest Frick Pumping Plant (AM & PM)
- Reported stolen fence and electrical (N1-P4, & North Well #2)
- Installed north-side turnout isolation base valve/operators (E-24 (4") E-16, C-97 (6") A-48, C-101 (8") E7, E-70, A-10, A-11, A61. C-27 (10"))
- Installed south=side turnout base isolation valve//operators (T-49, T-76 (6") T-25, T-38, T-53, T-77 W-45, W-46, M-12, M-31 (10"))

Underground Service Alert (USA) Report

- District initiated 2
- Responded to 84 USA notices to locate District underground facilities
    - 19 required markings of District facilities
    - 30 were renewals
    - 33 with no conflicts

Power Outages and/or Interruptions Involving the Following Systems

- No Power outages for the month

Laterals Prorates (number of days)

- No laterals were prorated this month

MAINTENANCE DEPARTMENT ACTIVITIES

Routine Activities

- Aquatic and terrestrial weed control
- Routine gardening and maintenance at Headquarters and CIMIS station
- Fence and gate repairs (Intake Canal)
- Grading and water truck
- Mowing (CIMIS Station)
- Cleared out forebays (North and South Canal)
- Assisted other Departments as needed (Mechanic, Operations, and Pump Shop)
- Conducted monthly safety meeting

Additional Activities

- Assisted Shop building stop log
- Built new reducers and pipe joints for Worcester valves (S73-P4 & S93-P2)
- Cleaned all shop areas
- Installed new wiring at Headquarters for remodeling project
- Installed new water heater in Mechanic shop area
- Open, inspected, and cleaned with Vacuum truck Standtanks for Winter Maintenance (north and south side)
- Installed valves and the base on various turnouts and realignment (north and south side)

New Reducers and Pipe Joints

- Installed 6-inch valve and piping (N55-P6)
- Weed & Rodent Control Department began yearly Pre-Emergent Program
- Cleaned tumbleweed around fence line with new Bobcat
- Used Crane to set stop log (Muller & Edison Road)
- Discing (Balancing Reservoir & Wasteway)
- Used water truck to keep domestic well tank full and cleaning of tanks
- Backhoe to backfill dig sites and repairs

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
Routine Service	11	A/C Service/Heater	2
Brakes	2	Belts	1
Tires	8	Headlights/Taillights	3
Tire Repairs	3	Shocks	0
Rotors/Drums /Wheel Bearings	0	Wiper Blades/Engine Washes	10
Batteries	2	Cabin Filter	2
Fuel Filters	4	Trailer Lights/Spot Lights	1
Tune-ups	1	Cleaned Throttle Body	4
Clean TPS Sensor	4		

- Heavy Equipment Repairs
  - Repaired axle (Schulte rotary cutter)
  - Repaired gang and bearing (Krause disc)
  - Repaired tire (John Deere backhoe)
  - Installed four (4) new tires (Challenger tractor)
  - Weekly inspection (gas tank and pump)

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

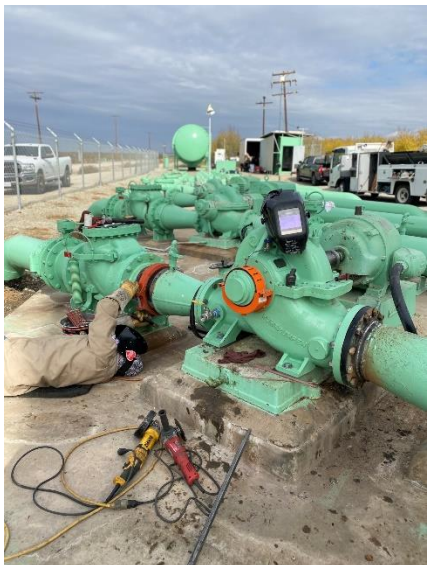
Additional Activities

- Continued working with Engineering Department on Pump Replacement Program
  - Continued pilot testing for Phase 2 (horizontal pumps)
- Replaced check valve springs and arms at multiple locations
- Installed Shur-joint coupler rings and valves district-wide
- Installed butterfly valves (12” & 16”)
- Removed racks from FFPP for fabrication (10)
- Repaired all moss screens district-wide for Winter Maintenance

FFPP Trash Rack Fabrication

PUMP & MOTOR REPAIR SUMMARY

	Pumping Plant/Wells	Unit	Size	Time/Hours	Reason
Vertical Pumps	S88-P1	2	10 CFS	16,000	Damaged shaft
Vertical Motors	S88-P1	2	200 HP	16,000	Damaged motor
	FFPP	2	5,00 HP	N/A	Water damage
Horizontal Pumps	N55-P2	8	5 CFS	4,500	New pump brand
	S73-P2	4	10 CFS	1,600	New pump brand
Horizontal Motors	None to Report				



New Horizontal Pump Install

Removal & Installation of Rebuilt Pump & Motor

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
Contactors Soft Starter	3	PLC's or Modules	4
Battery backup units	3	Fuses/Transducers	3
Radios	4	Soft Start Equipment	2
Wiring	4		

Additional Activities

- Programed Master SCADA Ignition Pro Designer software, continuing to update graphic designs for pumping plants
- Worked with Braxbro technician to install two (2) new desktop computers for master SCADA and the backup control panels
- Worked with CEI radio technicians to troubleshot and/or repair "loss of signal" (N8-P31 & S64-P3 , and moved radio antenna on the top of Standtanks
- Worked with GIGA Electrical at all south-side pumping plants for Winter Maintenance to conduct motor panel inspections per unit, tested, calibrated circuit breakers, Megger and performed motor insulation testing and inspection, cleaned floor breakers and 480V floor breaker back panels
- Worked with Dunbar electricians at south-side pump plants, cleaned Motor Control building and motor control panels for Winter Maintenance

FORREST FRICK PUMPING PLANT

- Zero AF of water was pumped during the month
- Consultants are designing reverse flow facilities into the Intake Canal to assist in regulating wellfield production during shoulder months to increase peaking water supplies
- Forebay was drained and cleaned

HOWARD FRICK PUMPING PLANT (AQUEDUCT INTERTIE)

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

EXHIBIT "A-1"

ARVIN-EDISON WATER STORAGE DISTRICT

2022 WATER SUPPLY AND DEMAND

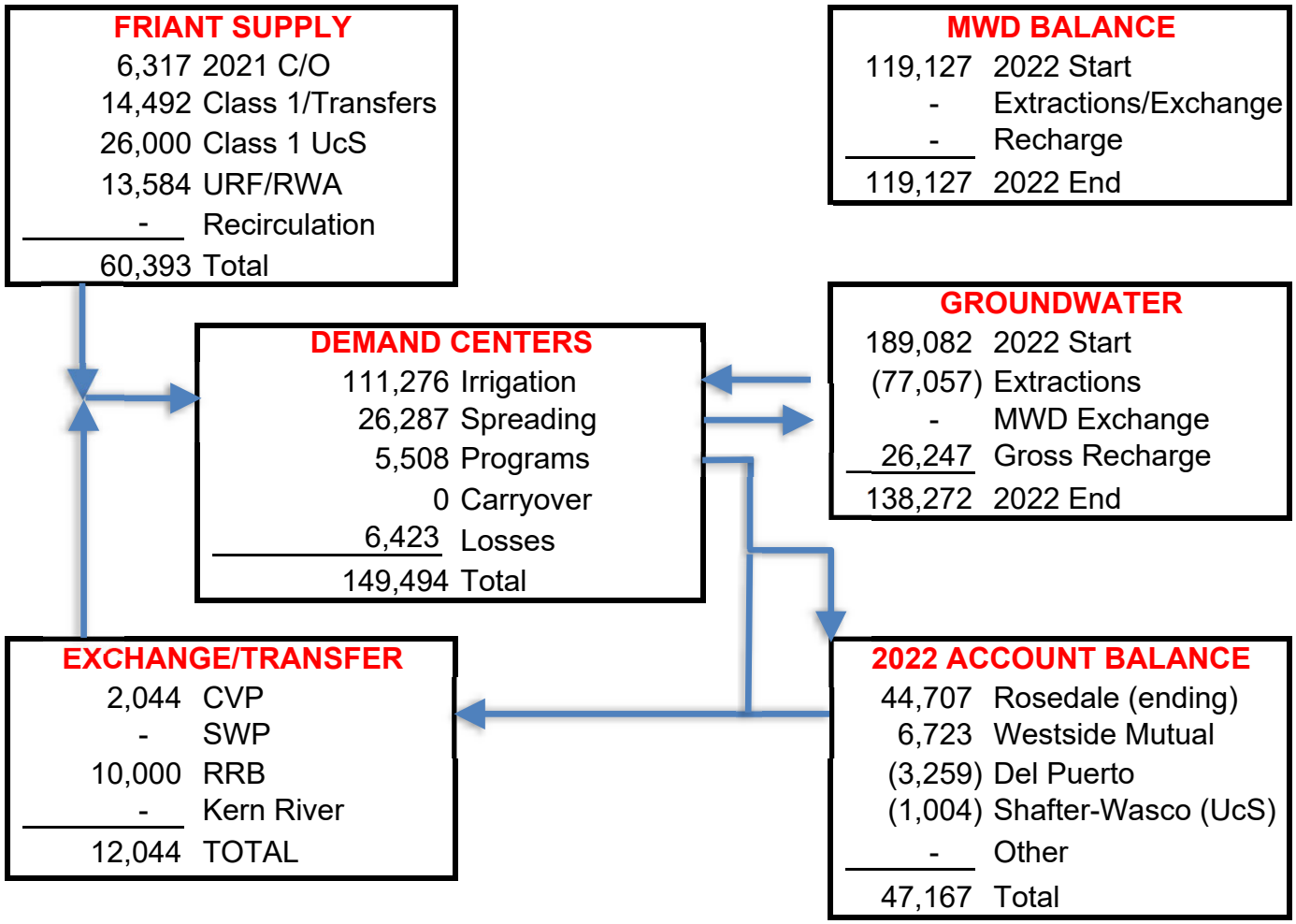
SUPPLY		***AF***	***%***
FRIANT-KERN (F-K)			
CARRYOVER OF 2021 WATER		6,317	
35% OF 40,000 AF CLASS 1		14,000	
65% OF 40,000 AF CLASS 1 (Uncontrolled Season)		26,000	
0% OF 311,675 AF CLASS 2 (Uncontrolled Season)/RWA		0	
0% OF 311,675 AF CLASS 2		0	
DEWATER		492	
URF TIER 2 BLOCK 1		2,000	
PRIORITY URF		5,600	
URF TIER 2 BLOCK 2		1,581	
PRIORITY URF		4,403	
TRANSFER IN URF (TID)		870	
TRANSFER IN URF (LSID)		1,000	
TRANSFER IN CLASS 1 (SWID)		174	
	SUBTOTAL	62,437	
FRESNO COUNTY		-589	
SJRRP RETURN		-3,500	
EXETER ID		-282	
IVANHOE ID		-281	
LINDMORE ID		-214	
ORANGE COVE ID		-50	
SAUCELITO ID		-100	
ROSEDALE-RIO BRAVO WSD		-492	
	TOTAL F-K	56,929	39.5%
CROSS VALLEY CANAL (CVC)			
SLR 2022 RECIRCULATION		17	
LINDMORE ID		14	
CHOWCHILLA WD		24	
SHAFTER-WASCO ID		51	
DEL PUERTO WD		-106	
	TOTAL CVC	0	0.0%
STATE WATER PROJECT (AQUEDUCT)			
KT EXCHANGE		0	
	TOTAL AQUEDUCT	0	0.0%
INTERTIE PIPELINE (IPL)			
RETURN TO MWD		0	
	TOTAL IPL	0	0.0%
KERN RIVER			
FRESNO COUNTY		0	
MWD BANKING		0	
KERN DELTA (RRBWSD EXCHANGE)		0	
	TOTAL KERN RIVER	0	0.0%
INTAKE CANAL PUMP-IN (IC)			
KERN DELTA WELLS		7,331	
KERN DELTA CENTRAL		2,669	
	TOTAL INTAKE CANAL	10,000	6.9%
TOTAL IMPORT		**66,929**	**46.5%**
GROUNDWATER PUMPING			
IRRIGATION DEMAND		77,057	
FARM PUMP IN		0	
RETURN TO MWD		0	
	TOTAL PUMPING	77,057	53.5%
TOTAL WATER SUPPLY		143,986	100.0%

DEMAND		
IRRIGATION DEMAND (MARCH-DECEMBER)	105,253	73.1%
IRRIGATION DEMAND (JANUARY-FEBRUARY)	6,023	4.2%
IN LIEU & TEMPORARY WATER	500	0.3%
SPREADING (MARCH-DECEMBER)	398	0.3%
SPREADING (JANUARY-FEBRUARY)	25,389	17.6%
CARRYOVER TO 2023	0	0.0%
LOSSES/METERING INACCURACIES	6,423	4.5%
TOTAL DEMAND	143,986	100.0%

Exhibit "A-2"

ARVIN-EDISON WATER STORAGE DISTRICT

2022 WATER MANAGEMENT



Surface Water	34,219	**31%**
Groundwater (48% of Max)	77,057	**69%**
Projected Irrigation Demand	111,276	**100%**

EXHIBIT "B"

ARVIN-EDISON WATER STORAGE DISTRICT

2022 WATER YEAR DELIVERIES

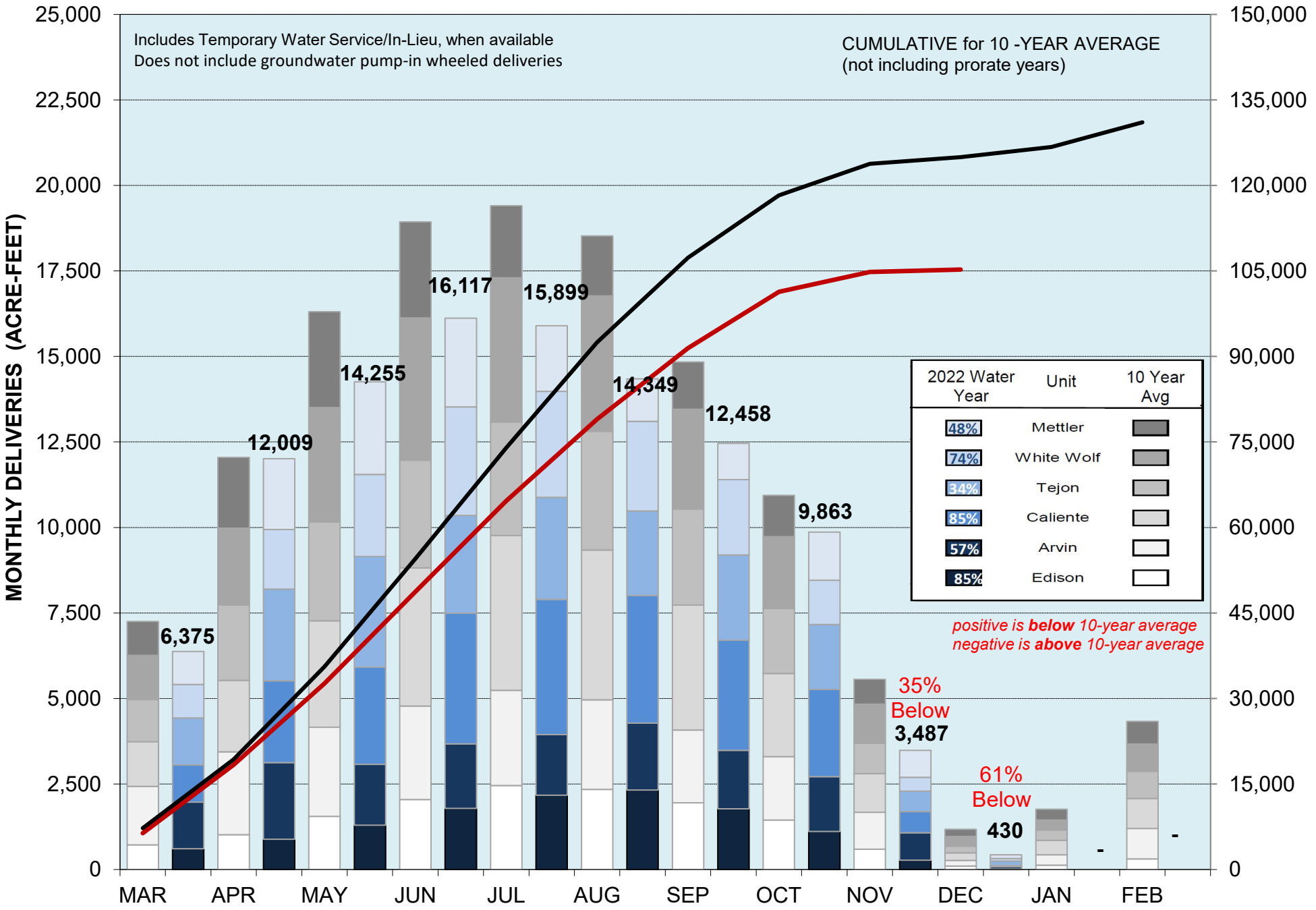


EXHIBIT "C1"

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	12/06/22	0	RESIDUAL WELLS(100%)	53.0	2.65	18.0	1.48	89.0	3.84	160	2.62	82.0	2.30	38.00	0.61	500	8.8	818	210	2.7	ND	0.25	5.0
	11/09/22	N/A	DOWN FOR WINTER MAINTENANCE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/04/22	50	FKC(100%)	7.0	0.35	0.7	0.05	7.6	0.33	40	0.66	3.7	0.10	0.84	0.01	45	7.6	81.2	20	0.7	1.10	0.037	3.2
	09/06/22	230	FKC(86%)/KD WELLS(14%)	9.2	0.46	1.1	0.09	8.3	0.36	44	0.72	4.7	0.13	1.40	0.02	53	7.9	101	28	0.7	0.75	0.064	2.3
	08/11/22	180	FKC(82%)/KD WELLS(18%)	13.0	0.65	1.4	0.11	11.0	0.47	52	0.85	6.7	0.19	3.00	0.05	71	8.1	135	37	0.8	0.46	0.052	1.6
	07/08/22	82	FKC(61%)/KD WELLS(39%)	23.0	1.15	2.3	0.19	19.0	0.82	90	1.48	12.0	0.34	4.80	0.08	120	8.4	223	67	1.0	0.98	0.096	1.9
	06/07/22	30	FKC(81%)/KD WELLS & KD CENTRAL(19%)	30.0	1.50	4.5	0.37	26.0	1.12	110	1.80	17.0	0.48	8.70	0.14	170	8.4	313	93	1.2	0.37	0.15	2.1
	05/09/22	30	KD WELLS & KD CENTRAL(100%)	20.0	1.00	3.5	0.29	24.0	1.03	98	1.61	9.3	0.26	2.50	0.04	130	8.2	254	64	1.3	1.40	0.16	6.4
	04/07/22	30	KD WELLS & KD CENTRAL(100%)	33.0	1.65	5.3	0.43	25.0	1.08	120	1.97	16.0	0.45	7.70	0.12	180	8.2	320	110	1.0	ND	0.16	3.2
	03/09/22	0	RESIDUAL FKC(100%)	6.0	0.30	0.8	0.06	5.5	0.24	29	0.48	3.3	0.09	0.34	ND	33	7.7	70	18	0.6	0.50	0.03	4.7
	02/08/22	150	FKC(100%)	3.9	0.20	0.6	0.05	4.3	0.19	20	0.33	4.1	0.12	0.50	0.01	20	7.6	53	12	0.1	0.00	0.10	2.8
	01/10/22	60	FKC(100%)	5.2	0.26	0.7	0.06	4.5	0.19	26	0.43	2.8	0.08	0.37	0.01	29	7.5	56	16	0.5	0.45	0.04	4.2
	12/13/21	0	RESIDUAL FKC(100%)	17.0	0.85	1.0	0.08	25.0	1.08	58	0.95	17.0	0.48	6.60	0.11	120	8.1	221	46	1.6	0.12	0.04	1.7
	11/09/21	80	FKC(100%)	16.0	0.80	1.2	0.10	21.0	0.91	67	1.10	13.0	0.37	3.50	0.06	100	8.0	197	46	1.3	0.78	0.09	2.6
	Average			**18.2**	**0.9**	**3.2**	**0.3**	**20.8**	**0.9**	**70.3**	**1.2**	**14.7**	**0.4**	**6.0**	**0.1**	**120.8**	**8.0**	**218.6**	**59.0**	**1.0**	**0.6**	**0.1**	**3.2**
North Canal	12/06/22	0	RESIDUAL WELLS(100%)	47.0	2.35	8.3	0.68	77.0	3.32	170	2.79	46.0	1.29	25.00	0.40	380	8.3	671	150	2.7	ND	0.50	2.6
	11/09/22	20	WELLS(100%)	38.0	1.90	6.1	0.50	67.0	2.89	160	2.62	36.0	1.01	8.50	0.14	320	8.4	550	120	2.6	1.40	0.67	2.4
	10/04/22	70	FKC(25%)/WELLS(75%)	21.0	1.05	3.9	0.32	40.0	1.72	120	1.97	21.0	0.59	7.30	0.12	180	8.1	322	69	2.1	2.60	0.27	2.8
	09/06/22	120	FKC(66%)/KD WELLS(11%)/WELLS(23%)	26.0	1.30	4.8	0.39	30.0	1.29	99	1.62	18.0	0.51	9.80	0.16	180	8.2	334	84	1.4	ND	0.27	1.9
	08/11/22	80	FKC(59%)/KD WELLS(13%)/WELLS(28%)	23.0	1.15	3.7	0.30	35.0	1.51	100	1.64	21.0	0.59	10.00	0.16	180	8.4	323	73	1.8	1.30	0.28	2.1
	07/08/22	80	FKC(25%)/KD WELLS(16%)/WELLS(59%)	27.0	1.35	4.4	0.36	43.0	1.85	120	1.97	23.0	0.65	9.30	0.15	200	8.4	373	87	2.0	1.40	0.29	2.8
	06/07/22	94	FKC(43%)/KD WELLS & KD CENTRAL(10%)/WELLS(47%)	21.0	1.05	3.7	0.30	55.0	2.37	120	1.97	27.0	0.76	11.00	0.18	220	8.4	380	68	2.9	3.20	0.41	2.8
	05/09/22	48	KD WELLS & KD CENTRAL(18%)/WELLS(82%)	26.0	1.30	4.9	0.40	55.0	2.37	140	2.30	30.0	0.84	11.00	0.18	240	8.3	450	85	2.6	2.30	0.41	3.2
	04/07/22	48	KD WELLS & KD CENTRAL(18%)/WELLS(82%)	19.0	0.95	3.8	0.31	27.0	1.16	100	1.64	13.0	0.37	5.80	0.09	130	8.1	241	64	1.5	1.70	0.09	3.6
	03/09/22	38	WELLS(100%)	16.0	0.80	2.9	0.24	43.0	1.85	95	1.56	20.0	0.56	2.10	ND	160	8.6	322	52	2.6	2.80	0.37	4.4
	02/08/22	134	FKC(100%)	5.0	0.25	0.6	0.05	4.4	0.19	23	0.37	5.1	0.14	0.50	0.01	22	8.0	59	15	0.1	0.00	0.10	4.7
	01/10/22	80	FKC(100%)	7.2	0.36	0.8	0.06	4.7	0.20	40	0.66	2.9	0.08	0.36	0.01	39	7.5	69	21	0.5	1.00	0.05	5.1
	12/13/21	0	RESIDUAL FKC(100%)	31.0	1.55	2.7	0.22	21.0	0.91	130	2.13	9.4	0.26	2.80	0.05	150	7.7	310	88	1.0	1.60	0.07	6.7
	11/09/21	58	FKC(100%)	17.0	0.85	1.3	0.11	19.0	0.82	71	1.16	12.0	0.34	2.70	0.04	98	8.2	190	47	1.2	0.94	0.10	3.3
	Average			**23.2**	**1.2**	**3.7**	**0.3**	**37.2**	**1.6**	**106.3**	**1.7**	**20.3**	**0.6**	**7.6**	**0.1**	**178.5**	**8.2**	**328.1**	**73.1**	**1.8**	**1.7**	**0.3**	**3.5**
South Canal	12/06/22	0	RESIDUAL WELLS(100%)	39.0	1.95	6.8	0.56	73.0	3.15	150	2.46	42.0	1.18	13.00	0.21	340	8.0	584	130	2.8	0.42	0.50	2.4
	11/09/22	10	WELLS(100%)	29.0	1.45	4.8	0.39	67.0	2.89	150	2.46	34.0	0.96	7.40	0.12	290	8.5	503	93	3.0	2.90	0.70	2.9
	10/04/22	60	FKC(18%)/WELLS(82%)	31.0	1.55	9.3	0.76	42.0	1.81	140	2.30	41.0	1.15	10.00	0.16	230	8.1	433	120	1.7	ND	0.23	1.6
	09/06/22	70	FKC(60%)/KD WELLS(10%)/WELLS(30%)	31.0	1.55	7.0	0.57	43.0	1.85	130	2.13	37.0	1.04	12.00	0.19	240	8.3	433	110	1.8	ND	0.31	1.6
	08/11/22	70	FKC(53%)/KD WELLS(11%)/WELLS(36%)	31.0	1.55	6.7	0.55	39.0	1.68	120	1.97	34.0	0.96	13.00	0.21	220	8.3	399	110	1.7	ND	0.22	1.5
	07/08/22	90	FKC(20%)/KD WELLS(13%)/WELLS(67%)	33.0	1.65	7.8	0.64	41.0	1.77	140	2.30	33.0	0.93	12.00	0.19	230	8.3	422	110	1.7	ND	0.21	2.4
	06/07/22	150	FKC(34%)/KD WELLS & KD CENTRAL(8%)/WELLS(58%)	29.0	1.45	7.6	0.62	50.0	2.16	140	2.30	41.0	1.15	11.00	0.18	240	8.2	437	100	2.1	1.20	0.27	1.3
	05/09/22	30	KD WELLS & KD CENTRAL(12%)/WELLS(88%)	23.0	1.15	5.1	0.42	51.0	2.20	120	1.97	29.0	0.81	16.00	0.26	230	8.5	424	79	2.5	2.60	0.40	3.0
	04/07/22	80	KD WELLS & KD CENTRAL(12%)/WELLS(88%)	33.0	1.65	9.8	0.80	37.0	1.59	140	2.30	37.0	1.04	9.20	0.15	220	8.2	419	120	1.4	ND	0.11	1.2
	03/09/22	20	WELLS(100%)	16.0	0.80	2.9	0.24	42.0	1.81	110	1.80	19.0	0.53	1.60	ND	160	8.6	311	51	2.6	3.80	0.37	5.0
	02/08/22	70	FKC(100%)	5.2	0.26	0.6	0.05	4.4	0.19	24	0.40	3.9	0.11	0.50	0.01	26	7.8	60	16	0.1	0.00	0.10	3.6
	01/10/22	40	FKC(100%)	8.0	0.40	0.8	0.06	4.8	0.21	36	0.59	2.8	0.08	0.35	0.01	37	7.8	73	23	0.5	0.51	0.05	3.8
	12/13/21	N/A	DOWN FOR WINTER MAINTENANCE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/09/21	160	FKC(100%)	18.0	0.90	1.4	0.11	20.0	0.86	74	1.21	12.0	0.34	2.70	0.04	100	8.1	199	51	1.2	0.86	0.10	3.1
	Average			**25.1**	**1.3**	**5.4**	**0.4**	**39.6**	**1.7**	**113.4**	**1.9**	**28.1**	**0.8**	**8.4**	**0.1**	**197.2**	**8.2**	**361.3**	**85.6**	**1.8**	**1.5**	**0.3**	**2.6**

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	12/06/22	0	RESIDUAL WELLS (100%)	34.0	1.70	6.1	0.50	70.0	3.02	150	2.46	38.0	1.07	6.20	0.10	310	8.4	540	110	2.9	1.50	0.60	2.1
	11/09/22	0	WELLS(100%)	23.0	1.15	5.8	0.48	56.0	2.41	130	2.13	37.0	1.04	6.60	0.11	N/A	8.6	436	N/A	N/A	N/A	0.57	4.7
	10/04/22	0	FKC(18%)/WELLS(82%)	31.0	1.55	9.1	0.75	44.0	1.90	130	2.13	41.0	1.15	10.00	0.16	240	8.2	431	120	1.8	ND	0.23	3.2
	09/06/22	0	FKC(60%)/KD WELLS(10%)/WELLS(30%)	23.0	1.15	6.0	0.49	37.0	1.59	97	1.59	30.0	0.84	7.90	0.13	190	8.5	355	81	1.8	0.35	0.25	3.9
	08/11/22	0	FKC(53%)/KD WELLS(11%)/WELLS(36%)	27.0	1.35	6.6	0.54	42.0	1.81	110	1.80	34.0	0.96	11.00	0.18	220	8.4	396	94	1.9	0.19	0.26	3.4
	07/08/22	0	FKC(20%)/KD WELLS(13%)/WELLS(67%)	34.0	1.70	8.5	0.70	43.0	1.85	140	2.30	36.0	1.01	12.00	0.19	240	8.2	442	120	1.7	ND	0.24	2.3
	06/07/22	0	FKC(34%)/KD WELLS & KD CENTRAL(8%)/WELLS(58%)	29.0	1.45	8.1	0.66	45.0	1.94	130	2.13	38.0	1.07	11.00	0.18	230	8.4	426	110	1.9	0.73	0.24	4.3
	05/09/22	0	KD WELLS & KD CENTRAL(12%)/WELLS(88%)	30.0	1.50	8.7	0.71	42.0	1.81	130	2.13	37.0	1.04	10.00	0.16	230	8.5	440	110	1.8	0.75	0.19	5.4
	04/07/22	0	KD WELLS & KD CENTRAL(12%)/WELLS(88%)	33.0	1.65	9.5	0.78	36.0	1.55	140	2.30	35.0	0.98	9.50	0.15	220	8.2	402	120	1.4	ND	0.12	2.7
	03/09/22	0	WELLS(100%)	15.0	0.75	3.0	0.25	15.0	0.65	65	1.07	10.0	0.28	4.10	0.07	90	8.2	187	51	0.9	0.24	0.07	4.4
	02/08/22	-40	FKC(100%)	6.7	0.34	0.8	0.06	4.5	0.19	26	0.43	4.4	0.12	0.50	0.01	29	8.1	76	20	0.0	0.00	0.10	7.0
	01/10/22	-40	FKC(100%)	9.8	0.49	0.9	0.08	5.7	0.25	41	0.67	3.5	0.10	0.54	0.01	44	7.9	87	28	0.5	0.45	0.05	4.5
	12/13/21	N/A	DOWN FOR WINTER MAINTENANCE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/09/21	0	FKC(100%)	22.0	1.10	4.6	0.38	31.0	1.34	93	1.52	18.0	0.51	4.90	0.08	150	8.4	299	73	1.6	0.72	0.20	4.0
	Average			**24.4**	**1.2**	**6.0**	**0.5**	**36.2**	**1.6**	**106.3**	**1.7**	**27.8**	**0.8**	**7.2**	**0.1**	**182.8**	**8.3**	**347.5**	**86.4**	**1.5**	**0.5**	**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

2022 AQUATIC PEST CONTROL TREATMENTS TO CANALS & SPREADING BASINS

Treatment Weeks (Monday)		Temps	Intake	North						South											
			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	01/03/22	36-62																	
	01/10/22																		
	01/17/22																		
	01/24/22																		
	01/31/22																		
FEB	02/07/22	33-67																	
	02/14/22																		
	02/21/22																		
	02/28/22																		
	02/28/22																		
MAR	03/07/22	43-73																	
	03/14/22																		
	03/21/22																		
	03/28/22																		
APR	04/04/22	48-77					10	20	20										
	04/04/22					65	2.5	5	5				9			9			
	04/11/22						5	10	10				5	10					
	04/11/22						2.5	2.5	2.5				11	2.5		7			
	04/18/22						10	10											
	04/18/22						2.5	2.5					17			7			
	04/25/22						10	10					10	10	10				
	04/25/22						2.5	2.5					14.5	2.5	2.5	4			
MAY	05/02/22	53-83					2.5	2.5	275	15	14		16			11			
	05/02/22						10	10											
	05/09/22												10		10				
	05/09/22												2.5		2.5				
	05/16/22						2.5	2.5		16	16								
	05/16/22						10	10											
	05/23/22												10			10	10		
	05/23/22					65	194						32.5			2.5	2.5		
	05/30/22					97	32						15			11			
JUN	06/06/22	63-93						10	2.5	21	21		24						
	06/13/22							10	2.5				20	10	2.5	11			
	06/20/22						5	240	80	16	16		12			6			
	06/20/22						10	10											
	06/27/22						2.5	10					23			19			
JUL	07/04/22	69-100						2.5	10					15		10	21		
	07/11/22							88.0	275.0	14	14		7			5			
	07/18/22			105				10	10										
	07/18/22			31					1				18			9			
	07/25/22						10	120.5	170				11			25			
AUG	08/01/22	70-101			127	38	148	65	5				12			5			
	08/01/22						46	10	10										
	08/08/22									26	18		11			10			
	08/15/22					65	204	88	250				8		10	9	10		
	08/22/22						10	10	5	23	23		13			13			
	08/29/22						5	10	10				10			8			
SEPT	09/05/22	70-95					250	80	250	80			19			8			
	09/12/22							2.5	2.5	23	23		17		2.5	12			
	09/12/22							10	10						10				
	09/19/22					127	19							7		7			
	09/26/22						148	48						5	8				
OCT	10/03/22	59-84						107	275				12		9				
	10/10/22																		
	10/17/22				7.5	7.5	2.5	2.5	2.5										
	10/17/22				30	30	10	10	10										
	10/24/22					2.5	2.5	2.5					2.5	2.5	2.5				
	10/24/22					10	10	10					10	10	10				
	10/31/22																		
NOV	11/07/22	42-65																	
	11/14/22																		
	11/21/22																		
	11/28/22																		
DEC	12/05/22	40-55																	
	12/12/22																		
	12/19/22																		
	12/26/22																		

2022 Cost To Date

Treatment	Material	Labor	Total
Captain/Nautique	$122,440	$11,865	$134,305
Phycomycin	$19,973	$14,455	$34,428
Cascade	$0	$0	$0
Teton/Hydrothol	$242,669	$50,190	$292,859
Spreading Basins	$0	$0	$0
Total	$385,083	$76,510	$461,593

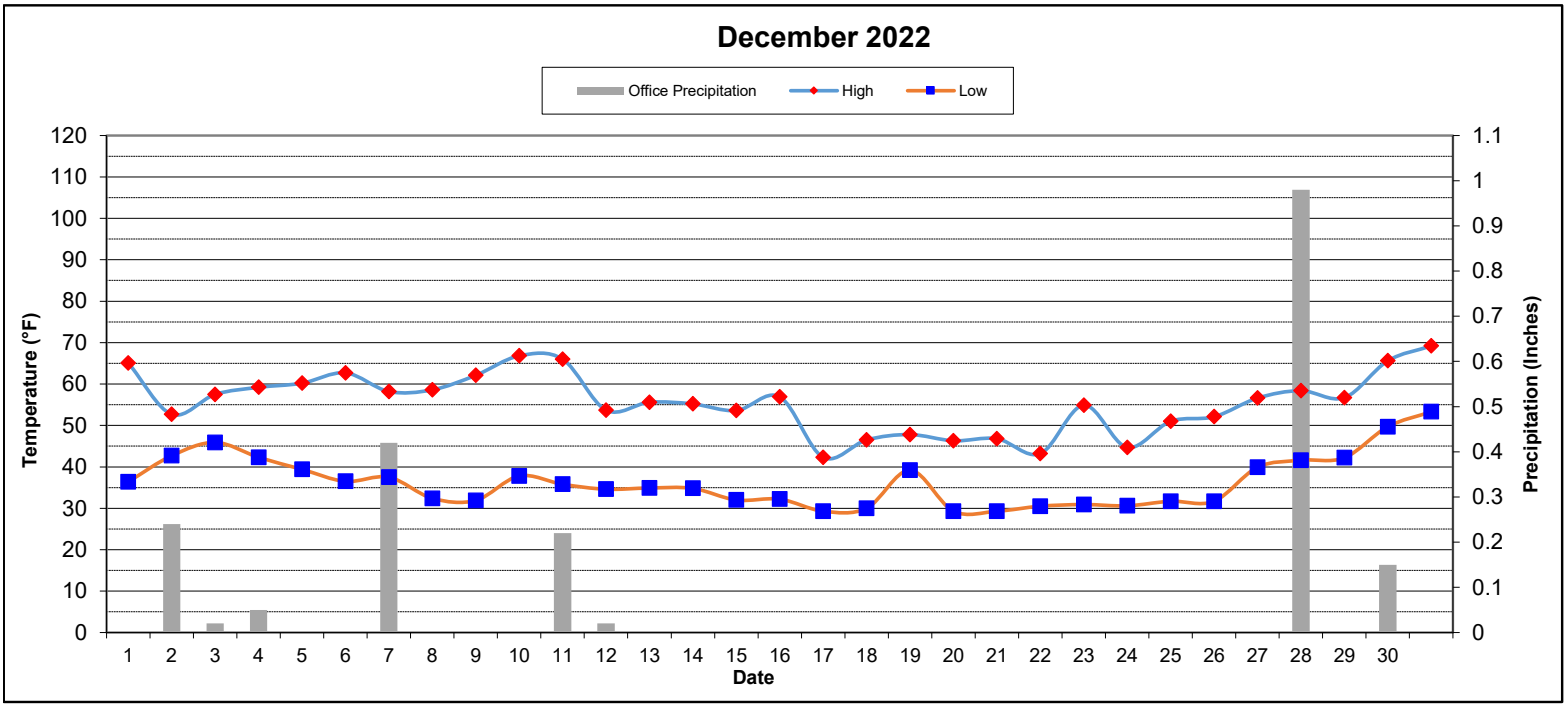
Shaded weeks are actual
Copper treatment (gal/lbs) for algae and pondweed (injected/broadcast)
Phycomycin (hydrogen peroxide) treatment (lbs) for algae (broadcast)
Endothall treatment (gal) for milfoil/basins (injected)
Endothall treatment (gal) for algae (injected)
Sonar/Clearcast/RoundUp Custom/MSO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

Year	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
Year Type	Critical-High	Dry	Wet	Normal-Dry	Wet	Normal-Dry	Critical-Low	Critical-High	Dry	Dry	Wet	Normal-Wet	Normal-Wet	Normal-Dry	Dry	Wet	Wet	Normal-Dry	Normal-Dry
Amount	$420,296	$399,808	$105,928	$235,599	$222,685	$186,034	$262,734	$367,563	$528,770	$504,159	$233,449	$24,969	$226,466	$341,506	$464,165	$341,920	$89,797	$65,324	$106,107

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	1.73		1.25		1.23		1.08		1.63	
AVG. YEAR TO DATE	2.93		2.77		2.79		2.43		2.70	
CURRENT MONTH	1.94	89%	2.10	168%	2.01	163%	2.04	189%	2.16	133%
CUMULATIVE (07/01/22 - 06/30/23)	4.90	167%	3.41	123%	4.57	164%	3.57	147%	3.93	146%

TEMPERATURE (6)	(ºF)	DATE	TIME
MAXIMUM TEMPERATURE	69	12/31/2022	4:00 PM
AVERAGE MAXIMUM TEMPERATURE	55		
# DAYS THIS MONTH ABOVE 100 ºF	0		
MINIMUM TEMPERATURE	29	12/22/2022	4:00 AM
AVERAGE MINIMUM TEMPERATURE	36		
# DAYS THIS MONTH BELOW 32 ºF	9		

WIND (6)	M.P.H.	DATE	TIME	DRCTN
MAXIMUM WIND SPEED	7.5	12/10/2022	7:00 PM	NE
AVERAGE WIND SPEED	3.2			
AVERAGE WIND SPEED @ 8:00 AM	3.3			

BAROMETRIC PRESSURE (7)	IN. HG	DATE	TIME
AVERAGE PRESSURE @ 8:00 AM	29.05		
MAXIMUM PRESSURE	29.90	12/20/2022	9:00 AM
MINIMUM PRESSURE	29.01	12/31/2022	8:00 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

WY2022 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 22	97,947	2,033,650	1,275	5,215,376	3,443	7,351,691	1,904	12,244	2	14,649	7	28,805	34%
APR	389,787	3,790,053	1,224	9,611,736	3,469	13,796,269	1,515	13,874	2	19,143	6	34,540	55%
MAY	607,866	4,566,990	13,773	11,461,732	3,770	16,654,130	2,715	14,821	341	19,138	6	37,022	60%
JUN	1,007,223	5,354,176	11,609	11,547,317	3,949	17,924,273	2,998	15,012	170	18,920	7	37,107	67%
JUL	1,415,785	5,520,288	8,626	8,849,588	4,243	15,798,529	4,166	14,719	357	13,224	8	32,473	65%
AUG	1,960,480	5,394,388	1,248	5,302,189	4,559	12,662,864	17,676	13,727	2	7,616	7	39,028	44%
SEP	1,709,286	4,707,633	1,219	4,157,268	4,254	10,579,659	5,313	14,201	2	7,907	9	27,432	54%
OCT	176,832	3,527,821	1,306	8,737,896	4,058	12,447,914	1,884	14,091	30	18,775	7	34,787	48%
NOV	34,600	1,130,490	1,260	3,026,365	3,526	4,196,241	902	9,173	4	14,907	10	24,996	23%
DEC	42,268	182,870	1,310	530,788	2,685	759,921	428	5,642	2	2,958	5	9,036	11%
JAN 23													
FEB													
TOTAL	7,442,073	36,208,358	42,850	68,440,254	37,956	112,171,491							

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

1/4/2023

EXHIBIT "F"

ARVIN-EDISON WATER STORAGE DISTRICT

2022 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 - 22	0	0%	988	81%	2,003	78%	1,886	29%	1,495	27%	6,372	206	41%
APR	0	0%	1,113	92%	2,943	96%	3,531	51%	3,503	70%	11,090	370	74%
MAY	0	0%	1,108	89%	3,402	92%	3,868	53%	4,018	74%	12,397	400	82%
JUN	0	0%	1,026	51%	3,160	86%	3,775	188%	3,782	189%	11,743	379	78%
JUL	0	0%	1,105	88%	3,510	92%	2,409	32%	2,636	49%	9,660	312	59%
AUG	0	0%	852	68%	2,086	55%	1,290	18%	1,707	33%	5,934	191	37%
SEP	0	0%	741	61%	1,709	52%	1,069	16%	1,294	29%	4,813	160	34%
OCT	0	0%	1,059	85%	3,141	94%	2,919	43%	2,821	62%	9,940	321	68%
NOV	0	0%	912	79%	1,788	87%	477	9%	345	8%	3,522	117	28%
DEC	0	0%	227	21%	202	10%	111	2%	0	0%	540	17	5%
JAN - 23		0%		0%		0%		0%		0%	0	0	0%
FEB		0%		0%		0%		0%		0%	0	0	0%
Total	0		9,131		23,945		21,336		21,601		76,012	206	42%
Ratio	0%		12%		32%		28%		28%		100%	**Average**	
Wells	4		5		14		34		29		86		

EXHIBIT "G"

ARVIN-EDISON WATER STORAGE DISTRICT

2022 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-22	0	0	0	0	0	0	0	0	0	0	0	0
APR	0	0	0	0	0	0	0	0	0	0	0	0
MAY	79	0	0	0	0	0	0	0	79	0	0	79
JUN	202	0	0	0	0	0	0	0	202	0	0	202
JUL	117	0	0	0	0	0	0	0	117	0	0	117
AUG	0	0	0	0	0	0	0	0	0	0	0	0
SEP	0	0	0	0	0	0	0	0	0	0	0	0
OCT	0	0	0	0	0	0	0	0	0	0	0	0
NOV	0	0	0	0	0	0	0	0	0	0	0	0
DEC	0	0	0	0	0	0	0	0	0	0	0	0
JAN-23												
FEB												
Total	398	0	0	0	0	0	0	0	398	0	0	398
Ratio												
Ratio												

Total Pressure	398		0			0			398			398

EXHIBIT "H-1"

ARVIN-EDISON WATER STORAGE DISTRICT

STATIC VS PUMPING WATER LEVELS IN DISTRICT WELLS - DECEMBER 2022

ALL VALUES IN FEET

	WELL #	STATIC LEVEL	PUMPING LEVEL	BOWL DEPTH	TOTAL DEPTH	DRAW DOWN	BOWL COVERAGE
NORTH CANAL (23)	N1	421	534	610	840	113	76
	N2	444	559	700	840	116	141
	N3	381	407	610	840	25	203
	N4	444	465	550	864	21	85
	N5	458	465	650	864	7	185
	N6	499	407	640	920	-92	233
	N7	454	478	600	1010	23	122
	N8	401	435	560	970	35	125
	N9	446	541	700	990	95	159
	N10	449	501	560	990	52	59
	N11	405	437	562	1020	32	125
	N12	450	478	600	1030	28	122
	N13	457	485	600	1000	28	116
	N14	445	468	540	900	23	72
	N15	423	538	700	1200	116	162
	N16	397	474	600	1200	76	126
	N17	388	485	610	1200	97	125
	N18	420	552	610	1190	132	58
	N19	469	516	760	1300	47	244
	N20	587	614	820	1020	28	206
	N21	456	534	660	950	78	126
	N22	464	485	680	990	21	195
	N23	438	465	680	990	27	215
	Avg	443	492				

	WELL #	STATIC LEVEL	PUMPING LEVEL	BOWL DEPTH	TOTAL DEPTH	DRAW DOWN	BOWL COVERAGE
TEJON (29)	71	562	592	800	1050	30	208
	72	532	597	800	1045	65	203
	73	520	569	800	1018	49	231
	74	511	567	800	1084	55	233
	75	518	571	800	1045	53	229
	76	474	587	700	996	113	113
	77	504	587	800	1066	83	213
	78	544	604	800	1038	60	196
	79	478	575	700	1032	97	125
	80	511	599	800	996	88	201
	81	416	464	700	925	49	236
	82	404	494	800	996	90	306
	83	567	620	800	996	53	180
	84	420	437	700	955	16	263
	86	514	544	800	996	30	256
	87	518	544	800	984	25	256
	88	511	551	800	948	39	249
	89	523	553	800	996	30	247
	90	400	441	700	996	42	259
	91	N/A	N/A	700	996	N/A	N/A
	92	527	592	800	996	65	208
	93	571	587	800	996	16	213
	94	590	629	860	996	39	231
	95	504	530	800	996	26	270
	96	578	678	800	996	99	122
	98	494	538	760	1340	44	222
	99	498	530	760	1340	32	230
	100	475	510	760	1340	35	250
	101	486	554	760	1310	68	206
	Avg	505	559				

	WELL #	STATIC LEVEL	PUMPING LEVEL	BOWL DEPTH	TOTAL DEPTH	DRAW DOWN	BOWL COVERAGE
SYCAMORE (34)	1	444	486	705	800	42	219
	2	394	466	690	876	72	224
	4	446	520	700	876	74	180
	5	480	482	720	876	2	238
	6	415	477	690	876	62	213
	7	453	515	700	830	62	185
	8	425	460	640	860	35	180
	9	471	515	700	886	44	185
	10	445	477	690	850	32	213
	11	446	483	700	880	37	217
	12	469	501	700	860	32	199
	13	439	483	700	850	44	217
	14	402	439	670	810	37	231
	15	470	608	710	820	139	102
	16	467	603	700	888	136	97
	17	428	555	650	820	127	95
	18	442	463	650	820	21	187
	20	435	472	680	804	37	208
	21	429	494	690	856	65	196
	22	409	432	610	792	23	178
	23	413	443	600	788	30	157
	24	425	453	580	780	28	127
	25	418	446	610	777	28	164
	26	417	475	690	816	58	215
	28	397	459	660	782	62	201
	29	447	468	690	787	21	222
	31	431	466	660	725	35	194
	32	407	522	640	739	116	118
	33	455	513	700	780	58	187
	34	N/A	N/A	700	781	N/A	N/A
	35	441	531	700	800	90	169
	36	450	499	600	820	49	101
	37	438	464	540	820	26	76
	38	490	528	860	1270	38	332
	Avg	438	491				

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
DEC-21	431	426	477	486	480	524
JAN	430	421	465	484	476	512
FEB	434	421	463	491	474	510
MAR	435	435	471	492	480	517
APR	448	444	518	505	494	566
MAY	453	471	547	509	525	593
JUN	457	467	547	512	523	591
JUL	454	462	542	510	517	588
AUG	453	452	533	509	504	578
SEP	454	459	542	510	510	587
OCT	455	458	530	512	512	572
NOV	448	443	514	489	496	569
DEC-22	443	438	505	492	491	559
CHANGE TO-DATE	-12	-12	-28	-6	-11	-35

OUT OF SERVICE (8)

AIRLINE FAILURE (12)

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)

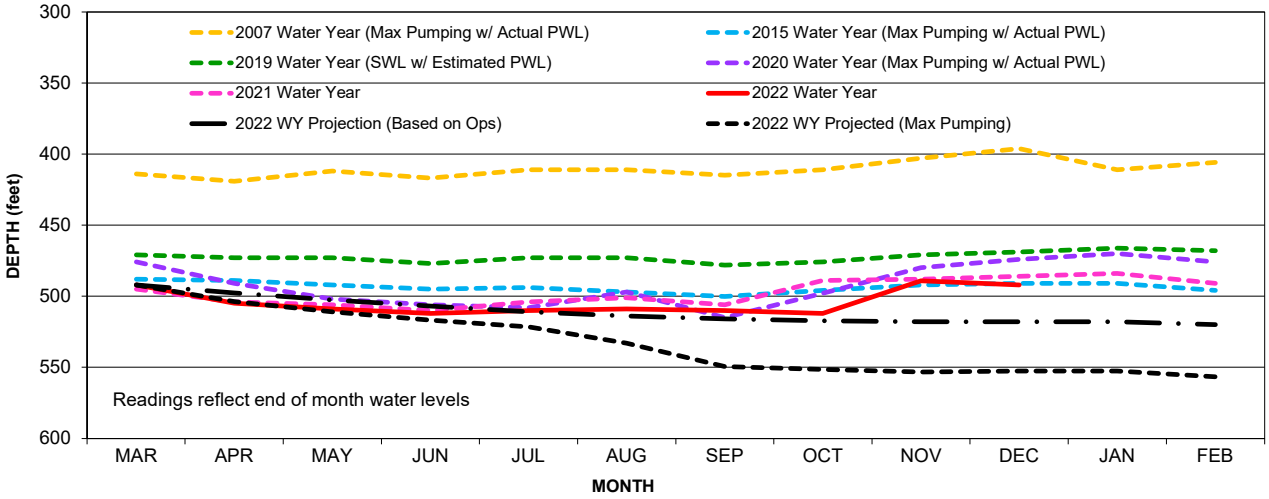
*Airline failure levels were obtained with acoustic sounder

EXHIBIT "H-2"

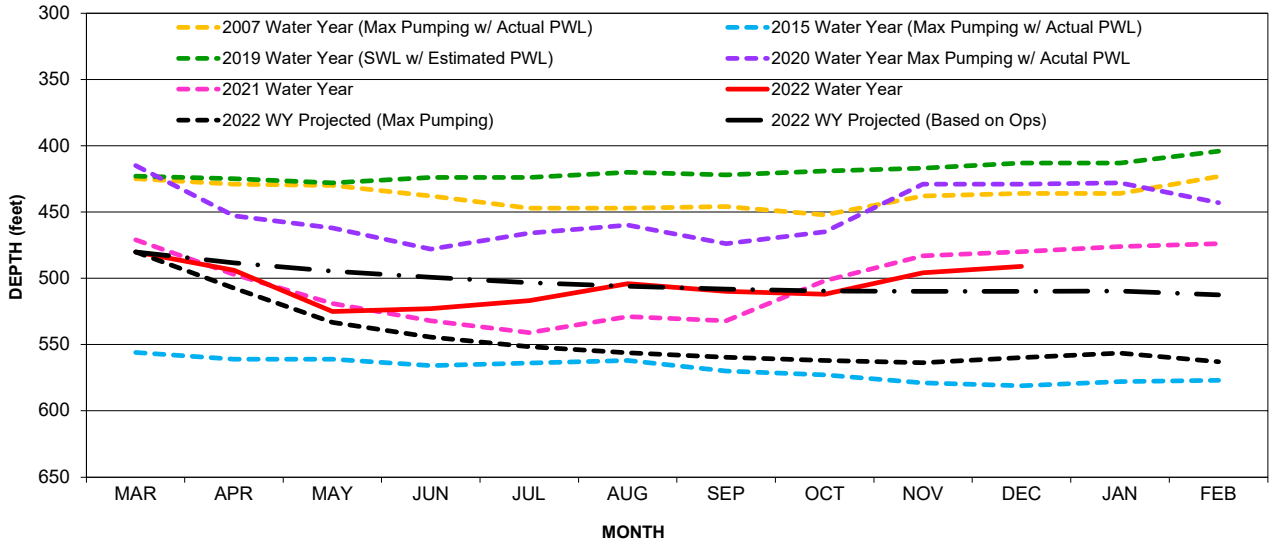
ARVIN-EDISON WATER STORAGE DISTRICT

WELLFIELD PUMPING WATER LEVELS - 2007, 2015, AND 2019-22

NORTH CANAL



SYCAMORE WELLFIELD



TEJON WELLFIELD