ARVIN-EDISON WATER STORAGE DISTRICT

REPORT OF DISTRICT OPERATIONS

July 2022

Solar Project Completed at District Headquarters

20401 East Bear Mountain Blvd.
Mailing: P.O. Box 175
Arvin, CA 93203-0175

Phone: 661-854-5573
Fax: 661-854-5213
E-mail: arvined@aewsd.org
Website: aewsd.org

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 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
Orange Cove Irrigation District
Rosedale-Rio Bravo Water Storage District
San Joaquin River Exchange Contractors
San Joaquin River Restoration Program
Saucelito Irrigation District
Sun Pacific
Westside Mutual Water Company

WATER DEMAND

- District surface water deliveries for the month were 15,899 AF
- The following is a summary of surface water deliveries for July 2022

	July 2022		Year to Date	
	Historical	2022 WY	Historical	2022 WY
Turnout Deliveries	19,948	15,899	75,242	64,655
In-Lieu Deliveries	-	-	-	-
Temporary Water	-	-		-
Spreading	-	117	-	-
Total	19,948	16,016	75,242	64,655

- Exhibit “B” illustrates the delivery data
- The month's peak daily in-District demand was 377 cfs, which occurred on the 1st
- Exhibit "C-1” details Canal Water Quality information
- Exhibit “C-2” presents the Aquatic Pest Control Treatments ($244,623) for Calendar Year 2022

GENERAL

- District vehicles consumed an estimated 3,647 gallons of fuel during the month (average fuel efficiency of 12.8 mpg)

- There were 379 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

- Staff continued to assist landowners with the Drought Allocation Program including administration of the 2nd Reallocation Pool

- 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 138 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** 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 out for bids with potential award in September
  - Forrest Frick and Eastside Canal Intertie (w/ Kern Delta WD)
    - Completed environmental compliance with USBR
    - Working with PG&E on facilities extension for new service
    - Bid was awarded to W.M. Lyles Company
  - 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
    - Freedom Farms
    - Frick Unit (Kern IRWMP project with application due in August)
  - Cathodic protection system upgrades
  - 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
  - Standtank Painting
    - Notice of Award went to Capital Coatings, Inc.
  - Tejon Spreading Works
    - Design repair for interbasin structure

SGMA Activities

- Continued coordination meetings and outreach activities
- Continued review of well permits and submitted comment letters to those within or near AEWSD
- Attended various GSA meetings
- Development of a potential Well Mitigation Policy
- Draft response to County's "Proof of Water" Policy
- Evaluate various Water Budget methodologies
- Development of a customized Groundwater Model for AEWSD
- Continued coordination efforts to complete South of Kern River GSP
  - Various Agreements approved and executed
  - Draft South of Kern River GSP was adopted at the "public hearing" on July 12 (posted on website www.aewsd.org)

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)
  - City of Bakersfield (Intake Canal)
  - Kern Delta Water District (Intake Canal)
- 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

SPREADING WORKS OPERATIONS (WELLFIELDS AND BASINS)

- Exhibit “F” summarizes wellfield production, which totaled 9,660 AF for the month

- Exhibit “G” summarizes gross direct spreading of 117 AF for the month July
- 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 Excess Vibrations	Pulled and inspected equipment, replacement pump installed
Sycamore	21	1970	300	Low Production	Pulled equipment, evaluating options
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

***Back in Service**

- Seven (7) out of 86, or 8%, 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 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

Closing Isolation Valve for Line Repair (Lateral S93)

        - 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)

Additional Activities

- Continued wellfield operations
- Cross-trained staff for Watermaster position
- Continued water patrol during the prorate period
- Responded to various pipeline leaks (S93-1-A)
- Perform wellfield switch over for water quality testing at all District locations
- Flush/clean lateral pipeline and wellfield airvents (North and South side)
- Responded to multiple facilities and pumping plant alarms (reset and primed laterals)
- Responded to various drain back and valve replacements (N1-P4 and N8-P1)
- Addressed various wellfield start-up/shut down issues
- Stencil identification numbers on turnouts, air vents, and isolation valves Greased and exercised various turnout/wellfield valve operators (North & South side)
- Repaired or replaced meters (Turnouts A-37, W-29, M-16) wellfield (Tejon #81)
- Attended instructional class for new GPS Vehicle Operating System

Underground Service Alert (USA) Report

- District initiated 0
- Responded to 119 USA notices to locate District underground facilities
    - 14 required markings of District facilities
    - 40 were renewals
    - 65 with no conflicts

Power Outages and/or Interruptions Involving the Following Systems

- There were numerous power outages for the month (Laterals N1 (2), N8 (2), N55 (2), S73 (1), S88 (1) S93 (1), End of Canal (1), and Intertie (1))

Laterals Prorates (number of days)

- S38 (5), and N55 (2)

MAINTENANCE DEPARTMENT ACTIVITIES

Routine Activities

- Aquatic and terrestrial weed control (South Canal)
- Routine gardening and maintenance at Headquarters and CIMIS station
- Fence and gate repairs (Balancing Reservoir, Intake Canal, and Gosford to Panama Lane)
- Grading and water truck (Sycamore Ponds)
- Discing (Valos Road and Sycamore Spreading Works)

- Mowing (CIMAS Station, and Sycamore Spreading Works)
- Cleared out forebays (North and South Canal)
- Assisted other Departments as needed (Mechanic, Operations, and Pump Shop)
- Conducted monthly safety meeting

Additional Activities

- Assisted with new fuel pump installation
- Discing at Sunset Spreading Works
- Installed water spout hook up for painting crew (Turnout E-35)
- Used backhoe to dig up pipeline repair near Turnout M-25
- Worked on disc bearing and hub assemble
- Used dump truck, backhoe, grader and dump trailer to build up well sites for Pacific Irrigation (Well #94, #96, and Tejon Ponds)
- Used backhoe and dump truck to haul road base around O&M building
- Used backhoe to remove material at Maintenance building (WRMWSD Siphon)
- Picked up new vehicles and prepped for use
- Prepared and painted various facilities
    - Doors and trim at North Ponds
    - Pumping Plant N55-P9
    - Repaired Fencing around the Balancing Reservoir

Unloading Backhoe for Pipeline Repair (Lateral S93)

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	A/C Compressor	1
Tires	12	Headlights	1
Tire Repairs	3	Tail Lights	3
Rotors/Drums /Wheel Bearings	3	Wiper Blades	6
Batteries	3	Cabin Filter	4
Fuel Filters	6	Trailer Lights	2
Tune-up	1	Routine Service	17

- Heavy Equipment Repairs
  - Installed new door (Challenger Tractor)
  - Installed new tires (water truck)
  - Repaired three gangs and wheel bearing (Krause disc)
  - Repaired blades (rotary cutter)

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

Pipeline Repair at Turnout M-25 (Lateral S93)

Additional Activities

- Continued working with Engineering Department on Pump Replacement Program
  - Continued pilot testing for Phase 2 (horizontal pumps)
- Completed and tested all electrical work (Tejon Well #81)
- Replaced 16-inch check valve disc, clapper arm, shaft and end nuts (N55-P2 Unit #7)
- Replaced 10-inch check valve disc, clapper arm, shaft and end nuts (N55-P13 Unit #1)
- Upsized sump pump from ½ hp to 1.5 hp due to increased pressures in system (N1-P8)

PUMP & MOTOR REPAIR SUMMARY

	Pumping Plant/Wells	Unit	Size	Time/Hours	Reason
Vertical Pumps	N1-P1	6	5 CFS	New Meter	Failed Suction Bell
Vertical Motors	None				
Horizontal Pumps	N55-P11	1	10 CFS	140,000	Bad Bearings
	N55-P9	1	5 CFS	11,000	Sleeves & Brass Ring
Horizontal Motors	None				

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 Start	1	Softstart Equipment	1
Coils	1	Trip Units	2
Hour Meters	3	Thermal Overloads	2

Additional Activities

- Programed Master SCADA ignition pro designer software, updated graphic designs for pumping plants
- Worked with CEI technician to troubleshoot the “loss of signal” alarms at Lateral N1
- Worked with Agilitech upstream water level sensor (NCSW), replaced with radar sensor and pulled ne shielded cable

FORREST FRICK PUMPING PLANT

- 6,883 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

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	
30% OF 40,000 AF CLASS 1		12,000	
0% OF 311,675 AF CLASS 2 (Uncontrolled Season)/RWA		0	
0% OF 311,675 AF CLASS 2		0	
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	33,945	
FRESNO COUNTY		-600	
SJRRP RETURN		-3,500	
EXETER ID		-282	
IVANHOE ID		-281	
LINDMORE ID		-214	
ORANGE COVE ID		-50	
SAUCELITO ID		-100	
	TOTAL F-K	28,918	24.3%
CROSS VALLEY CANAL (CVC)			
ROSEDALE-RIO BRAVO WSD (KDWD EXCHANGE)		0	
SLR 2022 RECIRCULATION		17	
LINDMORE ID		14	
CHOWCHILLA WD		24	
SHAFTER-WASCO ID		51	
DEL PUERTO WD		-106	
SLR 1% EVAPORATION LOSS		0	
	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		6,313	
KERN DELTA CENTRAL		3,687	
	TOTAL INTAKE CANAL	10,000	8.4%
TOTAL IMPORT		**38,918**	**32.7%**
GROUNDWATER PUMPING			
IRRIGATION DEMAND		80,077	
FARM PUMP IN		0	
RETURN TO MWD		0	
	TOTAL PUMPING	80,077	67.3%
TOTAL WATER SUPPLY		118,995	100.0%

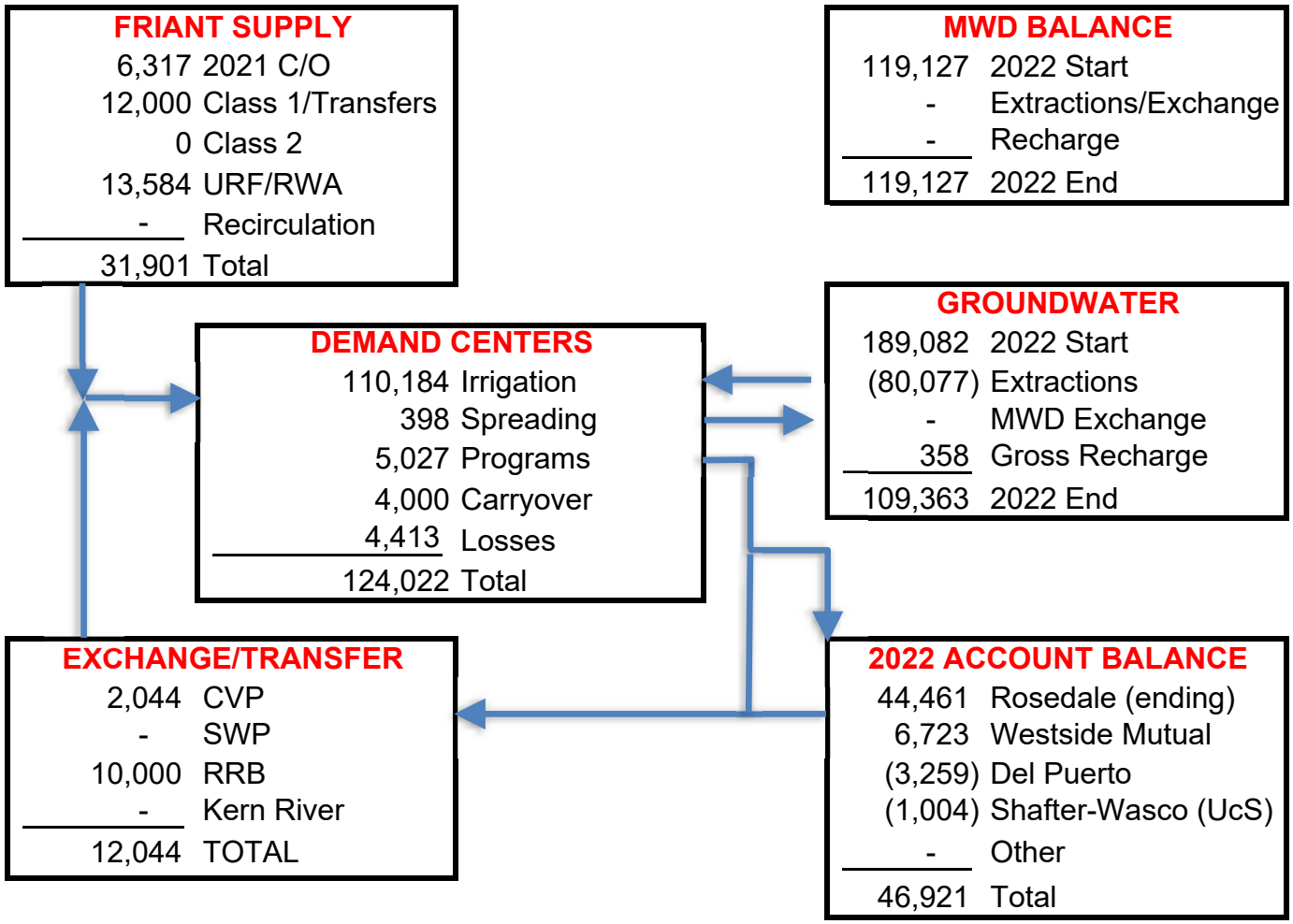
DEMAND		
IRRIGATION DEMAND (MARCH-JULY)	64,655	54.3%
IRRIGATION DEMAND (AUGUST-FEBRUARY)	45,529	38.3%
SPREADING (MARCH-JULY)	398	0.3%
SPREADING (AUGUST-FEBRUARY)	0	0.0%
CARRYOVER TO 2023	4,000	3.4%
LOSSES/METERING INACCURACIES	4,413	3.7%
TOTAL DEMAND	118,995	100.0%

8/9/2022

Exhibit "A-2"

ARVIN-EDISON WATER STORAGE DISTRICT

2022 WATER MANAGEMENT



Surface Water	30,505	**28%**
Groundwater (57% of Max)	80,077	**72%**
Projected Irrigation Demand	110,582	**100%**

EXHIBIT "B"

ARVIN-EDISON WATER STORAGE DISTRICT

2022 WATER YEAR DELIVERIES

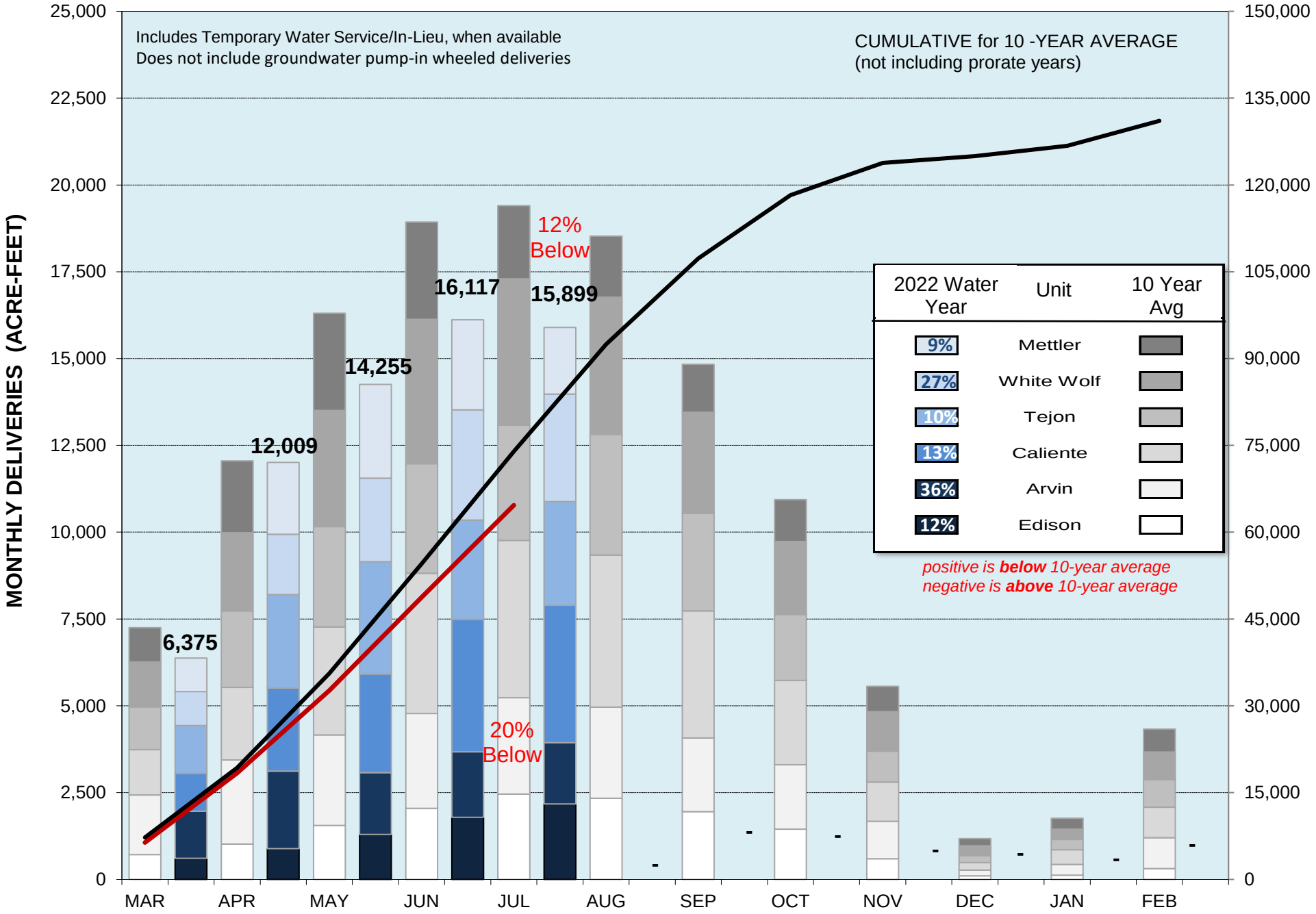


EXHIBIT "C1"

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	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	8.44	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
	10/07/21	40	CVC(100%)	7.5	0.38	0.7	0.06	8.0	0.34	33	0.54	3.8	0.11	1.10	0.02	43	7.6	79	22	0.8	0.47	0.03	1.8
	09/09/21	60	CVC(100%)	8.0	0.40	0.7	0.06	7.8	0.34	36	0.59	4.3	0.12	1.10	0.02	45	7.8	90	23	0.7	0.54	0.02	2.3
	08/09/21	35	CVC(56%)/KD WELLS(44%)	28.0	1.40	4.0	0.33	21.0	0.91	110	1.80	14.0	0.39	6.80	0.11	150	8.3	274	88	1.0	0.03	0.11	1.6
	07/08/21	35	CVC(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%)/CVC(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
	Average			**17.2**	**0.9**	**2.2**	**0.2**	**17.2**	**0.7**	**69.0**	**1.1**	**10.7**	**0.3**	**3.7**	**0.1**	**100.0**	**8.0**	**189.9**	**52.6**	**1.0**	**0.5**	**0.1**	**3.0**
North Canal	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
	10/07/21	14	CVC(24%)/WELLS(76%)	20.0	1.00	3.5	0.29	54.0	2.33	130	2.13	23.0	0.65	8.90	0.14	200	8.3	346	63	3.0	3.50	0.40	2.0
	09/09/21	70	CVC(31%)/WELLS(69%)	18.0	0.90	3.6	0.30	56.0	2.41	120	1.97	26.0	0.73	10.00	0.16	200	8.4	369	60	3.1	4.10	0.41	3.0
	08/09/21	14	CVC(10%)/KD WELLS(8%)/WELLS(82%)	24.0	1.20	4.4	0.36	34.0	1.47	130	2.13	15.0	0.42	12.00	0.19	170	8.2	314	77	1.7	2.40	0.12	2.9
	07/08/21	58	CVC(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%)/CVC(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
	Average			**18.8**	**0.9**	**3.1**	**0.3**	**36.0**	**1.6**	**104.5**	**1.7**	**17.5**	**0.5**	**6.6**	**0.1**	**155.3**	**8.2**	**289.4**	**59.3**	**1.9**	**2.3**	**0.2**	**3.7**
South Canal	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
	10/07/21	120	CVC(17%)/WELLS(83%)	32.0	1.60	8.6	0.70	49.0	2.11	140	2.30	40.0	1.12	11.00	0.18	240	8.1	428	120	2.0	0.05	0.21	2.0
	09/09/21	110	CVC(23%)/WELLS(77%)	32.0	1.60	9.2	0.75	45.0	1.94	140	2.30	44.0	1.24	10.00	0.16	240	8.3	453	120	1.8	0.06	0.22	1.8
	08/09/21	0	CVC(7%)/KD WELLS(5%)/WELLS(88%)	40.0	2.00	12.0	0.98	45.0	1.94	160	2.62	61.0	1.71	12.00	0.19	280	8.2	525	150	1.6	ND	0.14	1.6
	07/08/21	90	CVC(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%)/CVC(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	406	98	2.0	1.40	0.25	4.9
	Average			**24.5**	**1.2**	**6.2**	**0.5**	**36.3**	**1.6**	**113.7**	**1.9**	**30.1**	**0.8**	**7.9**	**0.1**	**185.3**	**8.2**	**347.9**	**86.5**	**1.6**	**1.1**	**0.2**	**2.7**

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	07/08/22	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	8.23	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
	10/07/21	0	CVC(17%)/WELLS(83%)	38.0	1.90	12.0	0.98	48.0	2.07	150	2.46	49.0	1.38	12.00	0.19	270	8.3	477	140	1.7	ND	0.17	4.5
	09/09/21	0	CVC(23%)/WELLS(77%)	37.0	1.85	12.0	0.98	44.0	1.90	160	2.62	49.0	1.38	13.00	0.21	260	8.2	496	140	1.6	ND	0.14	5.3
	08/09/21	0	CVC(7%)/KD WELLS(5%)/WELLS(88%)	31.0	1.55	10.0	0.82	43.0	1.85	130	2.13	44.0	1.24	11.00	0.18	240	8.5	451	120	1.7	ND	0.15	2.4
	07/08/21	0	CVC(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%)/CVC(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
	Average			**26.0**	**1.3**	**7.3**	**0.6**	**33.3**	**1.4**	**112.1**	**1.8**	**30.2**	**0.8**	**8.1**	**0.1**	**185.3**	**8.3**	**350.4**	**95.2**	**1.4**	**0.4**	**0.1**	**4.4**

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

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

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

ND: NONE DETECTED.

NA: NOT AVAILABLE OR NOT TESTED.

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

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

INTAKE: SAMPLE TAKEN AT COTTONWOOD RD. SOUTH OF PANAMA LANE.

NORTH: SAMPLE TAKEN DOWNSTREAM OF SYCAMORE CHECK GATE.

SOUTH: SAMPLE TAKEN DOWNSTREAM OF TEJON CHECK GATE.

INTERTIE: TERMINUS OF SOUTH CANAL (S93 FOREBAY).

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

NITRATE: NITRATE IN WATER SLIGHTLY REDUCES FERTILIZER REQUIREMENT.

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

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

TDS: TDS < 450 IS ACCEPTABLE FOR UNRESTRICTED USE.

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

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

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

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

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

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

EXHIBIT "C-2"
ARVIN-EDISON WATER STORAGE DISTRICT

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				9			9			
	04/04/22					65	2.5	5	5				5	10					
	04/11/22						5	10	10				11	2.5		7			
	04/11/22						2.5	2.5	2.5										
	04/18/22						10	10					17			7			
	04/18/22						2.5	2.5					10	10	10				
	04/25/22						10	10					14.5	2.5	2.5	4			
	04/25/22						2.5	2.5											
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																		
	08/08/22																		
	08/15/22																		
	08/22/22																		
	08/29/22																		
SEPT	09/05/22																		
	09/12/22																		
	09/19/22																		
	09/26/22																		
OCT	10/03/22																		
	10/10/22																		
	10/17/22																		
	10/24/22																		
	10/31/22																		
NOV	11/07/22																		
	11/14/22																		
	11/21/22																		
	11/28/22																		
DEC	12/05/22																		
	12/12/22																		
	12/19/22																		
	12/26/22																		

2022 Cost To Date

Treatment	Material	Labor	Total
Captain/Nautique	$57,154	$5,670	$62,824
Phycomycin	$11,460	$10,710	$22,170
Cascade	$0	$0	$0
Teton/Hydrothol	$128,898	$30,730	$159,628
Spreading Basins	$0	$0	$0
Total	$197,513	$47,110	$244,623

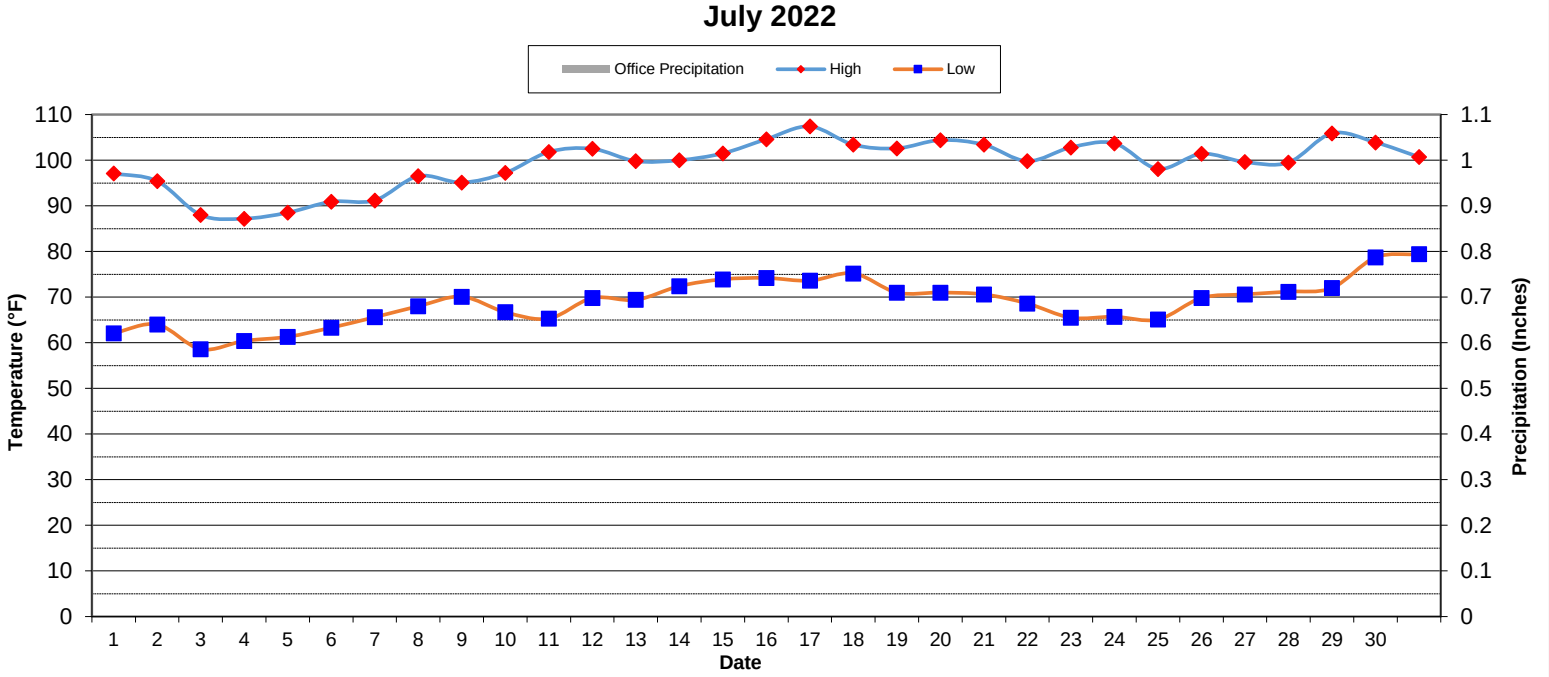
Shaded weeks are actual
Copper treatment (gal/lbs) for algae and pondweed (injected/broadcast)
Phycomycin (hydrogen peroxide) treatment (lbs) for algae (broadcast)
Endothall treatment (gal) for milfoil/basins (injected)
Endothall treatment (gal) for algae (injected)
Sonar/Clearcast/RoundUp Custom/MSO (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	0.04		0.09		0.07		0.07		0.04	
AVG. YEAR TO DATE	7.33		8.46		8.13		7.13		7.39	
CURRENT MONTH	0.00	7%	0.00	0%	0.00	0%	0.00	0%	0.00	0%
CUMULATIVE (07/01/21 - 06/30/22)	6.76	92%	7.81	92%	9.60	118%	6.98	98%	7.16	97%

TEMPERATURE *(6)*	(ºF)	DATE	TIME
MAXIMUM TEMPERATURE	107	7/17/2022	4:00 PM
AVERAGE MAXIMUM TEMPERATURE	99		
# DAYS THIS MONTH ABOVE 100 ºF	16		
MINIMUM TEMPERATURE	59	7/3/2022	4:00 AM
AVERAGE MINIMUM TEMPERATURE	69		
# DAYS THIS MONTH BELOW 32 ºF	0		

WIND *(6)*	M.P.H.	DATE	TIME	DRCTN
MAXIMUM WIND SPEED	20.0	7/29/2022	7:00 PM	NE
AVERAGE WIND SPEED	6.9			
AVERAGE WIND SPEED @ 8:00 AM	6.9			

BAROMETRIC PRESSURE *(7)*	IN. HG	DATE	TIME
AVERAGE PRESSURE @ 8:00 AM	29.41		
MAXIMUM PRESSURE	29.60	7/9/2022	9:00 AM
MINIMUM PRESSURE	29.20	7/11/2022	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													
SEP													
OCT													
NOV													
DEC													
JAN 23													
FEB													
TOTAL	3,518,607	21,265,156	36,507	46,685,749	18,874	71,524,892							

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

8/4/2022

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%		0%		0%		0%	0	0	0%
SEP		0%		0%		0%		0%		0%	0	0	0%
OCT		0%		0%		0%		0%		0%	0	0	0%
NOV		0%		0%		0%		0%		0%	0	0	0%
DEC		0%		0%		0%		0%		0%	0	0	0%
JAN - 23		0%		0%		0%		0%		0%	0	0	0%
FEB		0%		0%		0%		0%		0%	0	0	0%
Total	0		5,340		15,019		15,469		15,434		51,263	139	28%
Ratio	0%		10%		29%		30%		30%		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												
SEP												
OCT												
NOV												
DEC												
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 - JULY 2022

ALL VALUES IN FEET

	WELL #	STATIC LEVEL	PUMPING LEVEL	BOWL DEPTH	TOTAL DEPTH	DRAW DOWN	BOWL COVERAGE
NORTH CANAL (23)	N1	430	490	610	840	60	120
	N2	451	566	700	840	116	134
	N3	384	409	610	840	25	201
	N4	444	465	550	864	21	85
	N5	461	470	650	864	9	180
	N6	518	617	640	920	99	23
	N7	480	501	600	1010	21	99
	N8	419	461	560	970	42	99
	N9	457	554	700	990	97	146
	N10	473	517	560	990	44	43
	N11	426	456	562	1020	30	106
	N12	478	503	600	1030	25	97
	N13	478	503	600	1000	25	97
	N14	448	468	540	900	21	72
	N15	390	527	700	1200	136	173
	N16	390	469	600	1200	79	131
	N17	411	518	610	1200	106	92
	N18	445	577	610	1190	132	33
	N19	473	518	760	1300	45	242
	N20	596	633	820	1020	37	187
	N21	479	563	660	950	84	97
	N22	463	485	680	990	22	195
	N23	455	472	680	990	17	208
	Avg	454	510				

	WELL #	STATIC LEVEL	PUMPING LEVEL	BOWL DEPTH	TOTAL DEPTH	DRAW DOWN	BOWL COVERAGE
TEJON (29)	71	590	620	800	1050	30	180
	72	571	599	800	1045	28	201
	73	560	590	800	1018	30	210
	74	541	581	800	1084	39	219
	75	548	567	800	1045	18	233
	76	548	594	700	996	46	106
	77	539	638	800	1066	99	162
	78	530	590	800	1038	60	210
	79	524	571	700	1032	46	129
	80	520	620	800	996	99	180
	81	407	457	700	925	51	243
	82	444	492	800	996	49	308
	83	562	615	800	996	53	185
	84	423	462	700	955	39	238
	86	581	613	800	996	32	187
	87	576	604	800	984	28	196
	88	574	611	800	948	37	189
	89	544	574	800	996	30	226
	90	451	492	700	996	42	208
	91	N/A	N/A	700	996	N/A	N/A
	92	597	641	800	996	44	159
	93	605	648	800	996	43	152
	94	599	638	860	996	39	222
	95	528	554	800	996	26	246
	96	597	696	800	996	99	104
	98	568	605	760	1340	37	155
	99	560	605	760	1340	45	155
	100	542	575	760	1340	33	185
	101	543	603	760	1310	60	157
	Avg	542	588				

	WELL #	STATIC LEVEL	PUMPING LEVEL	BOWL DEPTH	TOTAL DEPTH	DRAW DOWN	BOWL COVERAGE
SYCAMORE (34)	1	467	513	705	800	46	192
	2	480	528	690	876	48	162
	4	501	541	700	876	39	159
	5	512	544	720	876	32	176
	6	443	514	690	876	72	176
	7	494	550	700	830	55	150
	8	444	478	640	860	35	162
	9	504	545	700	886	42	155
	10	480	519	690	850	39	171
	11	478	531	700	880	53	169
	12	487	522	700	860	35	178
	13	462	527	700	850	65	173
	14	425	492	670	810	67	178
	15	481	622	710	820	141	88
	16	476	626	700	888	150	74
	17	437	567	650	820	129	83
	18	456	486	650	820	30	164
	20	463	495	680	804	32	185
	21	464	484	690	856	21	206
	22	439	467	610	792	28	143
	23	438	478	600	788	39	122
	24	458	492	580	780	35	88
	25	446	476	610	777	30	134
	26	454	501	690	816	46	189
	28	415	494	660	782	79	166
	29	468	491	690	787	23	199
	31	454	489	660	725	35	171
	32	418	522	640	739	104	118
	33	462	534	700	780	72	166
	34	N/A	N/A	700	781	N/A	N/A
	35	451	538	700	800	88	162
	36	458	488	600	820	30	112
	37	458	483	540	820	25	57
	38	471	507	860	1270	36	353
	Avg	462	517				

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-21	445	469	540	504	541	600
AUG	445	462	548	501	529	605
SEP	448	464	550	506	532	607
OCT	432	445	512	489	502	566
NOV	434	429	501	488	483	547
DEC	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-22	454	462	542	510	517	588
CHANGE TO-DATE	-9	7	-2	-6	24	12

OUT OF SERVICE (11)

AIRLINE FAILURE (13)

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)

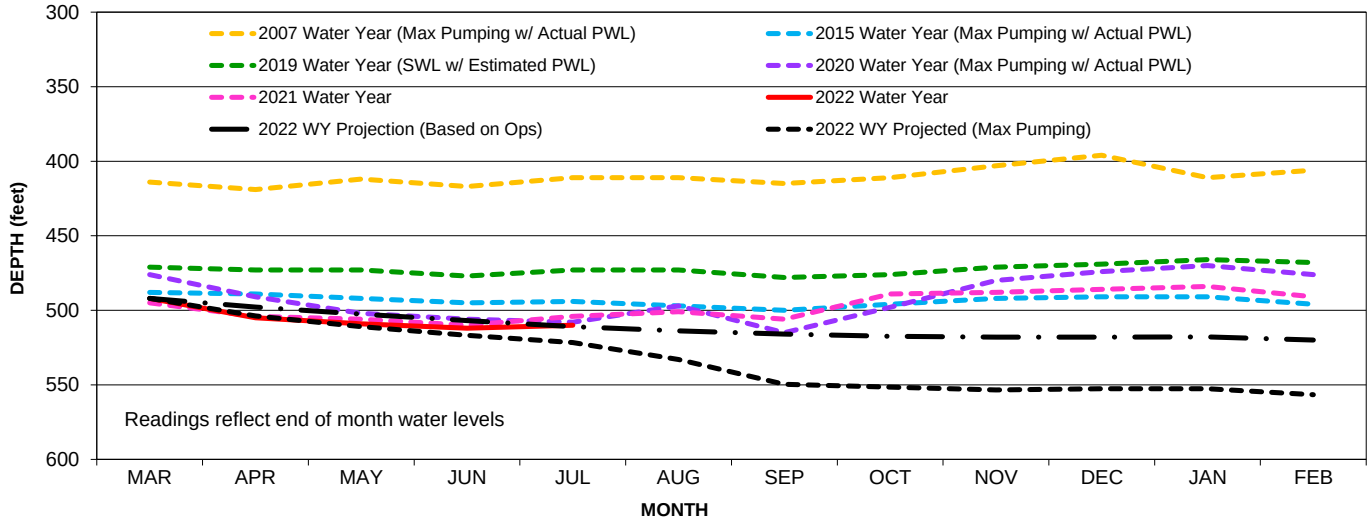
*Airline failure levels were obtained with acoustic sounder

EXHIBIT "H-2"

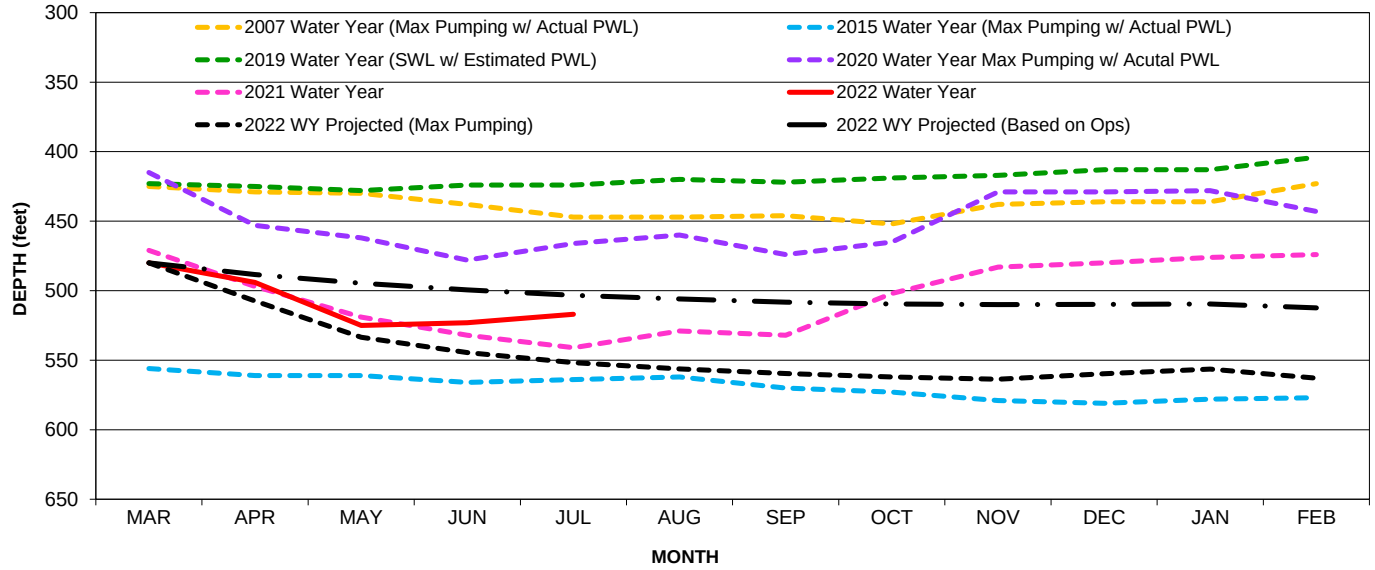
ARVIN-EDISON WATER STORAGE DISTRICT

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

NORTH CANAL



SYCAMORE WELLFIELD



TEJON WELLFIELD