ARVIN-EDISON WATER STORAGE DISTRICT

REPORT OF DISTRICT OPERATIONS

November 2022





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Cleaning of Intake Canal for Winter Maintenance (North Side)

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 Orange Cove Irrigation District

Del Puerto Water District

Exeter Irrigation District

Fresno County

Rosedale-Rio Bravo Water Storage District

San Joaquin River Exchange Contractors

San Joaquin River Restoration Program

Ivanhoe Irrigation District Saucelito Irrigation District

Kern Delta Water District Shafter-Wasco Irrigation District

Kern Water Bank Sun Pacific

Lindmore Irrigation District Tulare Irrigation District

Lindsay- Strathmore Irrigation District Westside Mutual Water Company

WATER DEMAND

District surface water deliveries for the month were 3,487 AF 3,487

The following is a summary of surface water deliveries for November 2022

	Novem	<u> 1022 ber 2022 </u>	Year t	to Date		
	Historical	2022 WY	Historical	2022 WY		
Turnout Deliveries	5,692	3,487	126,088	104,866		
In-Lieu Deliveries	-	-	-	-		
Temporary Water	-	-		-		
Spreading	-	-	-	-		
Total	5,692	3,487	126,088	104,866		

- Exhibit "B" illustrates the delivery data
- The month's peak daily in-District demand was 197 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 3,528 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
- Scott Spitzer was appointed new Director of Division 5 on November 8, 2022
- Samuel Blue was hired as the new Resource Manager on November 7,2022
- District is experiencing more frequent theft at various District facilities including Headquarters
- Exhibit "D" highlights precipitation, temperature, and wind speed



Scott Spitzer New Director -Division 5

 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

- 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:

o Phone (661) 336-0967

Website (<u>www.ca.nrcs.usda.gov</u>)

 North West Kern Resource Conservation District provides discounted on-farm irrigation distribution uniformity and efficiency testing

o 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 new service
 - Bid was awarded to W.M. Lyles Company
 - Construction begins 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



Construction at Forrest Frick
Eastside Canal Intertie

- Turnout Modification Requests
- Temporary and/or In-Lieu Water Service Contract Requests
 - Freedom Farms
 - Frick Unit
- 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
- Monthly production spreadsheet
- Tejon Spreading Works
 - o 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
- o Development of a customized Groundwater Model for AEWSD
- Continued coordination efforts with South of Kern River GSP (posted on website www.aewsd.org)
- Continued coordination efforts with White Wolf Subbasin GSP (posted on website www.whitewolfgsa.org)
- o 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
- o 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)
- o 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
 - o 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)
 - o 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)
- o Review and coordinate Demand Response Program
- o 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)

<u>SPREADING WORKS OPERATIONS (WELLFIELDS AND BASINS)</u>

- Exhibit "F" summarizes wellfield production, which totaled 9,940 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:

<u>Field</u>	Well #	Year	<u>HP</u>	Reason	<u>Work</u>			
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 asneeded 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

- Begun working on Winter Maintenance project list; prepped north-side turnout/operator flanges
- Cross trained employees (Watermaster, South Unit Chief, and Night Basin Console positions)
- Assisted with various pumping plant, wellfield and district facility control service repairs
- Performed power shutdown at North Canal Wellfield per Pacific Gas & Electrical request
- Monitored and patrolled Forrest Frick Pumping Plant
- o Reported stolen fence and electrical (Balancing Reservoir)
- Dewatered Forrest. Frick Pumping Plant forebay level in preparation for Intake Canal maintenance
- Responded to multiple facilities and pumping plant alarms (reset and primed laterals)
- Facility Improvements on eight valve operators and six turnout meters
- Pulled, cleaned and/repaired pump plant standtank transducer ports (N1, N8, N24, N41), and pump plant chamber pressure gauge ports (valve operators (T-77), meters (Turnouts T-68, W-29) and N1, N8, N24, and N41)
- Assisted Engineering Department with new Facility Guidebook

Underground Service Alert (USA) Report

- District initiated 5
- Responded to 158 USA notices to locate District underground facilities



Valve Replacement (E-55)

- 28 required markings of District facilities
- 51 were renewals
- 74 with no conflicts

Power Outages and/or Interruptions Involving the Following Systems

Power outages for the month were (Laterals N1 (1), N8 (1). N41 (1), S64 (1)S73 (1), Intertie (1) and Sycamore (1)

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 (N1-P4 and Balancing Reservoir)
- 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
- Repaired welder in Shop
- Built metal stop log (Sycamore Pond 4)
- Cleaning of Intake Canal with bobcats and personnel as well as long reach Excavator
- Cleaned Forrest Frick Pumping Plant (FFPP) forebay



Cleaning of Intake Canal - Winter Maintenance



Concrete Liner Repair (Intake Canal)

- Cleared out cubicles and furniture for remodeling (Headquarters)
- Repaired/replaced stolen fencing throughout the District
- Hauled off old furniture to waste facility
- Weed & Rodent Control Department began yearly Pre-Emergent Program
- o Cleaned out overgrown Sycamore Creek with new Bobcat
- Used Crane, Gradall and reach Excavator to clean Intake Canal and FFPP forebay
- Followed-up behind spray pre-emergent crew with water truck
- Performed concrete liner repair along Intake Canal

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

Part	Repair/Replaced	Part	Repair/Replaced
Alternator	1	A/C Service/Heater	5
Brakes	2	Belts	1
Tires	6	Headlights/Taillights	3
Tire Repairs	2	Shocks	4
Rotors/Drums	2	Wiper Blades/Engine	12
/Wheel Bearings	2	Washes	12
Batteries	3	Cabin Filter	4
Fuel Filters	6	Trailer Lights/Spot Lights	4
Tune-ups	2	Routine Service	18
Clean TPS Sensor	6	Cleaned Throttle Body	6

- Heavy Equipment Repairs
 - Repaired clutch (Gradall)
 - Installed hydraulic hose (Krause disc)
 - Replaced blade bolts (Mower)
 - Installed new PTO switch (Dump Truck)
 - 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)
- Compressor and well motor/canal facilities oil changes district-wide



New Pump Installation (N55-P2)

- Review Intake Canal Langmann gates (Stine Canal and Kern Island Canal) for repairs as needed
- o Assist Maintenance Department with sediment removal of the Intake Canal

PUMP & MOTOR REPAIR SUMMARY

	Pumping Plant/Wells	<u>Unit</u>	Size	Time/Hours	<u>Reason</u>
Vertical Pumps	Tejon	5	20 CFS	33,000	Rebuilt pump
	Intertie	3	20 CFS	7,300	Rebowled pump
Vertical Motors	None to report				
Horizontal Pumps	S73-P2	4	10 CFS	2,536	Replaced Buhr/spilt case
	S73-P2	2	10 CFS	6,400	Worn sleeves and rings
	S73-P2	1	10 CFS	4000	Broken pump shaft
Horizontal Motors	N55-P2	6	200 HP	2,500	Damaged 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
Contactors Soft Starter	2	PLC's or Modules	1
Circuit Breakers	4	Fuses/Transducers	1
Hour Meters	1	Soft Start Equipment	2
Wiring	1	Wiring/Circuit Breaker	1

Additional Activities

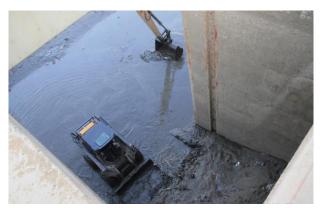
- Programed Master SCADA Ignition Pro Designer software, updated graphic designs for pumping plants
- Worked with CEI radio technician to troubleshot and/or repair "loss of signal" (N1 & N8 Laterals) communication and programmed the ladder logic program concentrator of the north side pimp plants.
- Worked with GIGA Electrical to install UPS battery backup, power fail indicator lights and control relays for "power fail" alarm (Laterals N1-P6, N1-P8, N24-P1, N8 & N41)
- Worked with Agilitech at Sycamore Spreading Works power outage, and replaced 12KV line cable, cross arm and insulators
- Worked with Dunbar electricians at the north-side pump plans, cleaned Motor Control building and motor control panels for Winter Maintenance
- Assisted GIGA Electrical with Installing UPS battery backup, power fail indicator lights and control relays for "power fall" (S88-P1, S73 Lateral, S93 -P1) as well as north-side pumping plants, conducted motor panel inspection per unit, tested and calibrated circuit breakers preformed motor insulation testing and inspected and cleaned floor breaker back 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.





Drained and Cleaned Forebay (FFPP)

EXHIBIT "A-1"

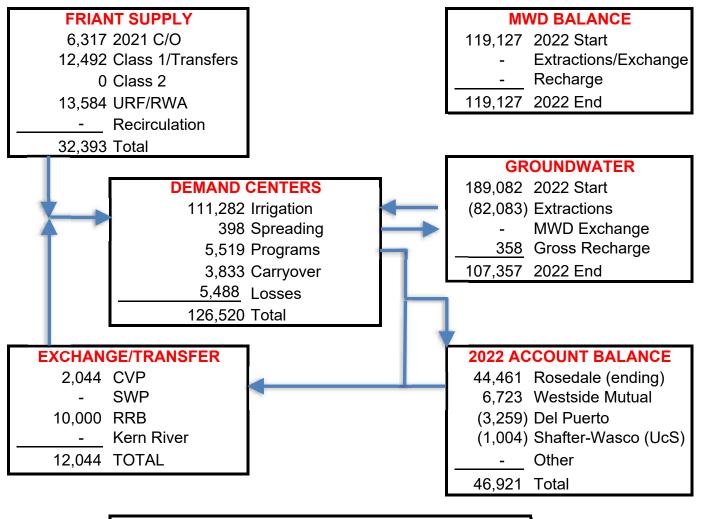
ARVIN-EDISON WATER STORAGE DISTRICT

2022 WATER SUPPLY AND DEMAND

SUPPLY		<u>AF</u>	<u>%</u>
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 (Unconti	rolled 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	34,437	
FRESNO COUNTY		-600	
SJRRP RETURN		-3,500	
EXETER ID		-282	
IVANHOE ID		-262 -281	
LINDMORE ID		-214	
		-214 -50	
ORANGE COVE ID SAUCELITO ID		-50 -100	
SAUCLLITU ID	TOTAL F-K	29.410	24.3%
	IOIALI-N	23, 4 10	24.3%
CROSS VALLEY CANAL (CVC)			
ROSEDALE-RIO BRAVO WSD		-492	
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	-492	-0.4%
STATE WATER DRO JECT (ACHERICAT)			
STATE WATER PROJECT (AQUEDUCT) KT EXCHANGE		0	
· · · · · · · · · · · · · · · · · · ·	TOTAL AQUEDUCT	0	0.0%
INTERTIE PIPELINE (IPL)		_	
RETURN TO MWD	TOTAL IPL	0	0.0%
	IVIALIFL	U	0.0%
KERN RIVER			
FRESNO COUNTY		0	
MWD BANKING		0	
KERN DELTA (RRBWSD EXCHANGE	≣)	0	
	TOTAL KERN RIVER	0	0.0%
INTAKE CANAL BUMB IN (10)			
INTAKE CANAL PUMP-IN (IC)		7 221	
KERN DELTA CENTRAL		7,331	
KERN DELTA CENTRAL	TOTAL INTAKE CANAL	2,669	8.3%
	TOTAL INTAKE CANAL	10,000	0.3%
TOTAL IMPORT		38,918	32.2%
		•	
GROUNDWATER PUMPING		00.000	
IRRIGATION DEMAND		82,083	
FARM PUMP IN		0	
RETURN TO MWD	TOTAL DUMBING	0 000	07.00
	TOTAL PUMPING	82,083	67.8%
TOTAL WATER SUPPLY		121,001	100.0%
. C I FINITE COLL ET		121,001	100.070
DEMAND			
<u>DEMAND</u>			
<u>DEMAND</u> IRRIGATION DEMAND (MARCH-NO)	/EMBER)	104,813	86.6%
		104,813 6,469	86.6% 5.3%
IRRIGATION DEMAND (MARCH-NO			
IRRIGATION DEMAND (MARCH-NO) IRRIGATION DEMAND (DECEMBER	-FEBRUARY)	6,469	5.3%
IRRIGATION DEMAND (MARCH-NO) IRRIGATION DEMAND (DECEMBER: SPREADING (MARCH-NOVEMBER)	-FEBRUARY)	6,469 398	5.3% 0.3%
IRRIGATION DEMAND (MARCH-NO) IRRIGATION DEMAND (DECEMBER: SPREADING (MARCH-NOVEMBER) SPREADING (DECEMBER-FEBRUAF	-FEBRUÁRY) RY)	6,469 398 0	5.3% 0.3% 0.0%
IRRIGATION DEMAND (MARCH-NOV IRRIGATION DEMAND (DECEMBER: SPREADING (MARCH-NOVEMBER) SPREADING (DECEMBER-FEBRUAR CARRYOVER TO 2023	-FEBRUÁRY) RY)	6,469 398 0 3,833	5.3% 0.3% 0.0% 3.2%

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

2022 WATER MANAGEMENT



Surface Water	29,597	27 %
Groundwater (51% of Max)	82,083	73%
Projected Irrigation Demand	111,680	100%

EXHIBIT "B"

ARVIN-EDISON WATER STORAGE DISTRICT

2022 WATER YEAR DELIVERIES

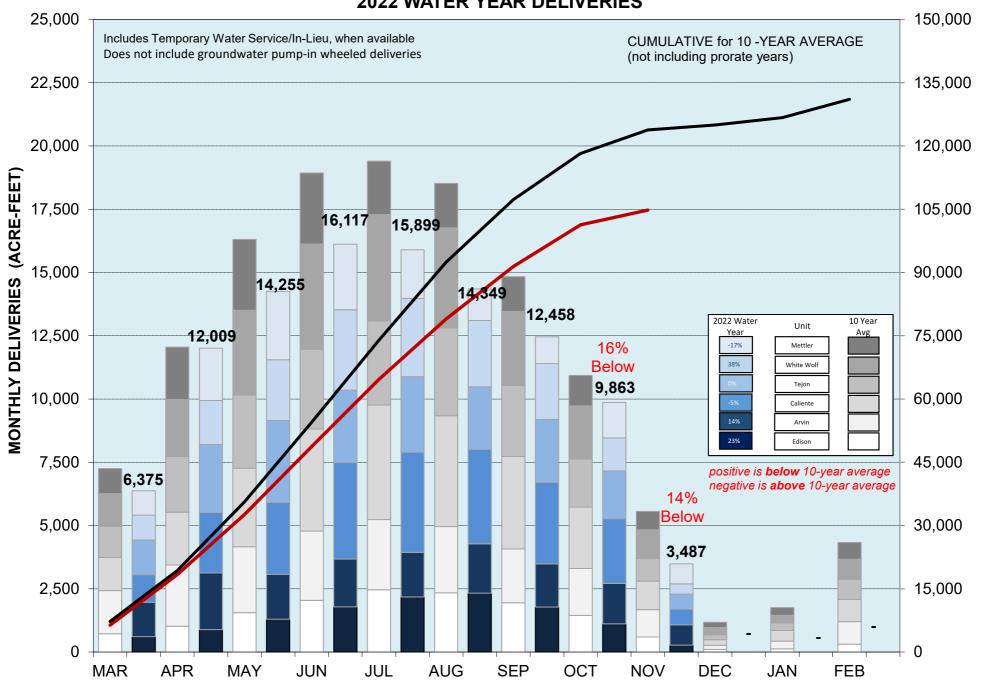


EXHIBIT "C1" ARVIN-EDISON WATER STORAGE DISTRICT WATER SUPPLY WATER QUALITY SUMMARY

	Date	Flow	Import	Calo	cium	Magn	esium	Sod	ium	Bicark	onate	Chlo	ride	Niti	rate	TDS	рΗ	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
	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	7.57	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	7.87	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	8.12	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	8.44	223	67	1.0	0.98	0.096	1.9
ā	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
Canal	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
0	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
Intake	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
Ĩ.	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
	Average			14.7	0.7	1.8	0.1	14.6	0.6	60.6	1.0	8.7	0.2	3.2	0.1	85.7	7.9	161.7	44.5	0.9	0.6	0.1	3.0
	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
je	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
Canal	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
North	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
	Average			21.2	1.1	3.4	0.3	35.6	1.5	103.4	1.7	18.7	0.5	6.4	0.1	165.6	8.2	304.9	66.9	1.8	1.8	0.3	3.4
	11/09/22	0	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	2.9	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
Canal	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
Cal	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
South	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
S	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	8.0	0.06	4.8	0.21	36	0.59	2.8	80.0	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
<u> </u>	Average			24.6	1.2	5.6	0.5	37.7	1.6	112.6	1.8	28.0	8.0	8.2	0.1	189.5	8.2	349.3	84.8	1.7	1.5	0.3	2.5

EXHIBIT "C1"

ARVIN-EDISON WATER STORAGE DISTRICT

WATER SUPPLY WATER QUALITY SUMMARY

	Date	Flow ¹	1 Import		Calcium		Magnesium So		Sodium Bicarbonate		Chlo	ride	Nitr	ate	TDS	рН	EC	Hardness	SAR	Gypsum	Boron	Turbidity	
		cfs	S Source		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
	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	8.57	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	8.21	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	8.51	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	8.38	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	8.23	442	120	1.7	ND	0.24	2.3
line	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
be	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
P	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
rtie	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
Inte	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
	Average		·	24.7	1.2	6.4	0.5	34.6	1.5	106.3	1.7	28.7	8.0	7.7	0.1	179.4	8.3	342.6	88.9	1.4	0.4	0.2	4.2

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:

SAR:

BORON:

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.

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.

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 < 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

	reatment Weeks	Temps
(1	Monday)	Ĕ.
	01/03/22	
z	01/10/22	32
JAN	01/17/22	36-62
	01/24/22	.,
	01/31/22 02/07/22	
	02/14/22	2
FEB	02/21/22	33-67
_	02/28/22	e
	02/28/22 03/07/22	
~	03/07/22	73
MAR	03/21/22	43-73
	03/28/22	, i
	04/04/22	
	04/04/22 04/11/22	
APR	04/11/22	48-77
4	04/18/22	48
	04/11/22 04/18/22 04/18/22	
	04/25/22	
	04/25/22	
	05/02/22 05/02/22	
	05/02/22	
>	05/09/22	33
MΑΥ	05/16/22	53-83
	05/16/22	47
	05/23/22 05/23/22	
	05/30/22	
	06/06/22	
z	06/13/22	693
S N	06/20/22	63-93
	06/20/22	
	07/04/22	
_	07/11/22	00
킼	07/18/22	39-100
	07/18/22 07/25/22	u u
	08/01/22	
	08/01/22	_
AUG	08/08/22	70-101
4	08/15/22	70-
	08/22/22 08/29/22	
	09/05/22	
E	09/12/22	5
SEPT	09/12/22	70-95
U)	09/19/22	7
	09/26/22 10/03/22	
	10/10/22	
_		4
OCT	10/17/22 10/17/22	59-84
Ĭ	10/24/22	2
	10/24/22	
	10/31/22 11/07/22	
>	11/14/22	42-65
No No	11/21/22 11/28/22	42-
DEC	12/05/22	
B	12/19/22 12/26/22	

		No	rth		
Bal.	PP		PP	PP	Syc.
Res.	24P1	NCSW	41P1	55P1	Ponds
145+00	237+00	326+50	413+10	546+00	576+50
			10	20	20
		65	2.5	5	5
			5	10	10
			2.5	2.5	2.5
			10 2.5	10 2.5	
			2.5	10	
			2.5	2.5	
			2.5	2.5	275
			10	10	
			2.5	2.5	
			10	10	
		05	404		
		65 97	194 32		
		91	32	10	2.5
				10	2.5
			5	240	80
			10	10	
			2.5	10	
				2.5	10
				88.0	275.0
105				10	10
31			10	120.5	1 170
	127	38	148	65	5
	.21	30	46	10	10
		65	204	88	250
			10	10	5
			5	10	10
			250	80	250
				2.5	2.5
		407	40	10	10
		127	19 148	48	
			140	107	275
				107	210
	7.5	7.5	2.5	2.5	2.5
	30	30	10	10	10
		2.5	2.5	2.5	
		10	10	10	

				So	uth				
Syc.	PP	PP	Tej.	Tej.	615	729	883	Spill	Intertie
Check	32P1	38P1	Ponds	Check	Check	Check	Check	Way	Forbay
664+30	291+50	386+30		458+40	615+00	729+10	883+00	885+45	900+27
—									
			0			9			
—			9	10		9			
\vdash			5	10		-		l	
			11	2.5		7			
						_			
			17			7			
			10	10	10				
			14.5	2.5	2.5	4			
15	14		16			11			
			10		10				
			2.5		2.5				
16	16								
			10			10	10		
			32.5			2.5	2.5		
			15			11			
21	21		24						
			20	10	2.5	11			
16	16		12			6			
			23			19			
				15		10	21		
14	14			7		5			
			18			9			
			11			25			
			12			5			
	·								
26	18		11			10		 	l
20	10		8		10	9	10		
23	23		13		10	13	10		
20	20		10			8			
80			19			8			
23	23		17		2.5	12			
23	23		- 17		10	12			-
				7	10	7			
\vdash				5	8	-		-	l
—			12	5	9				
\vdash			12		9				
—									
			2.5	2.5	2.5				
			10	10	10				

2022
Cost To
Date

Intake Stine Siphon 353+87

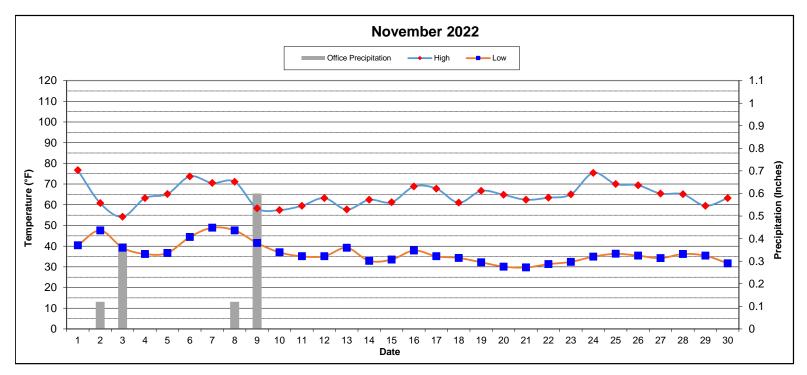
Treatment	Material	Labor	Total
Captain/Nautique	\$122,440	\$11,865	\$134,305
Phycomycin	\$19,973	\$14,455	\$34,428
Cascade	\$0	\$0	\$0
Teton/Hydrothol	\$242,669	\$50,190	\$292,859
Spreading Basins	\$0	\$0	\$0
Total	\$385,083	\$76,510	\$461,593

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	\$300 808	\$105 928	\$235 500	\$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	0.20		0.31		0.29		0.00		0.00	
AVG. YEAR TO DATE	0.09		0.24		0.01		0.09		0.06	
CURRENT MONTH	0.04	225%	0.09	29%	0.00	0%	0.00	0%	0.00	0%
CUMULATIVE (07/01/22 - 06/30/23)	0.34	378%	0.09	38%	0.03	300%	0.34	378%	0.23	383%

TEMPERATURE (6)	(°F)	DATE	TIME
MAXIMUM TEMPERATURE	75	11/24/2022	4:00 PM
AVERAGE MAXIMUM TEMPERATURE	64		
# DAYS THIS MONTH ABOVE 100 °F	0		
MINIMUM TEMPERATURE	29	11/21/2022	4:00 AM
AVERAGE MINIMUM TEMPERATURE	36		
# DAYS THIS MONTH BELOW 32 °F	2		

WIND (6)	M.P.H.	DATE	TIME	DRCTN
MAXIMUM WIND SPEED	6.1	11/8/2022	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	29.50		
MAXIMUM PRESSURE	29.80	11/16/2022	9:00 AM
MINIMUM PRESSURE	29.20	11/8/2022	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 CO	NSUMED - K	WH				TOTAL DI	EMAND - K	W		
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%
ОСТ	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													
JAN 23													
FEB													
TOTAL	7,399,805	36,025,488	41,540	67,909,467	35,271	111,411,571							

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

12/7/2022

EXHIBIT "F"

ARVIN-EDISON WATER STORAGE DISTRICT

2022 WATER YEAR WELLFIELD PRODUCTION - AF

	F	Bal Res	Norti	h Canal 5			Well					Total	
Month	-		11011	% of Historical	N	orth % of Historical	Syc	amore % of Historical	•	Tejon % of Historical			
	AF	% of Historical Max	AF	% of Historical	AF	% of Historical	AF	% of Historical	AF	% of Historical	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%
ост	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%		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	8	3,904	23	3,743	21	,225	2	1,601	75,472	205	42%
Ratio		0%		12%		32%		<u>,</u> 8%		29%	100%		verage
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
ОСТ	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												
JAN-23												
FEB												
Total	398	0	0	0	0	0	0	0	398	0	0	398
Ratio Ratio												

Total	398	0		0		398		398
Pressure								

EXHIBIT "H-1" ARVIN-EDISON WATER STORAGE DISTRICT STATIC VS PUMPING WATER LEVELS IN DISTRICT WELLS - NOVEMBER 2022 ALL VALUES IN FEET

	WELL#	STATIC LEVEL	PUMPING LEVEL	BOWL DEPTH	TOTAL DEPTH	DRAW DOWN	BOWL COVERAGE
	N1	428	541	610	840	113	69
	N2	453	568	700	840	116	132
	N3	384	409	610	840	25	201
	N4	446	467	550	864	21	83
	N5	463	472	650	864	9	178
	N6	508	605	640	920	97	35
	N7	464	487	600	1010	23	113
_	N8	410	445	560	970	35	116
23	N9	451	548	700	990	97	152
NORTH CANAL (23)	N10	447	498	560	990	51	62
₹	N11	412	442	562	1020	30	120
A	N12	461	489	600	1030	28	111
Ú	N13	464	491	600	1000	28	109
Ξ	N14	448	471	540	900	23	69
区	N15	395	552	700	1200	157	148
9	N16	395	474	600	1200	79	126
_	N17	404	501	610	1200	97	109
	N18	436	568	610	1190	132	42
	N19	462	103	760	1300	-359	657
	N20	591	621	820	1020	30	199
	N21	478	556	660	950	78	104
	N22	464	485	680	990	21	195
	N23	445	458	680	990	13	222
	Avg	448	489				

		STATIC	PUMPING	BOWL	TOTAL	DRAW	BOWL
	WELL#	LEVEL	LEVEL	DEPTH	DEPTH	DOWN	COVERAGE
	71	562	592	800	1050	30	208
	72	518	611	800	1045	92	189
	73	532	581	800	1018	49	219
	74	525	581	800	1084	55	219
	75	507	583	800	1045	76	217
	76	490	603	700	996	113	97
	77	525	608	800	1066	83	192
	78	544	604	800	1038	60	196
	79	492	589	700	1032	97	111
	80	518	606	800	996	88	194
TEJON (29)	81	425	474	700	925	49	226
	82	404	494	800	996	90	306
	83	571	624	800	996	53	176
	84	432	448	700	955	16	252
	86	532	562	800	996	30	238
	87	530	555	800	984	25	245
	88	525	564	800	948	39	236
	89	532	560	800	996	28	240
	90	414	455	700	996	42	245
	91	N/A	N/A	700	996	N/A	N/A
	92	546	608	800	996	62	192
	93	567	583	800	996	16	217
	94	590	629	860	996	39	231
	95	504	530	800	996	26	270
	96	578	678	800	996	99	122
	98	508	552	760	1340	44	208
	99	517	549	760	1340	32	211
	100	497	532	760	1340	35	228
	101	501	569	760	1310	68	191
	Avg	514	569				

		STATIC	PUMPING	BOWL	TOTAL	DRAW	BOWL
	WELL#	LEVEL	LEVEL	DEPTH	DEPTH	DOWN	COVERAGE
	1	458	499	705	800	42	206
	2	406	477	690	876	72	213
	4	474	527	700	876	53	173
	5	487	491	720	876	5	229
	6	420	482	690	876	62	208
	7	457	518	700	830	60	182
	8	425	460	640	860	35	180
	9	474	518	700	886	44	182
	10	450	482	690	850	32	208
	11	448	487	700	880	39	213
	12	474	506	700	860	32	194
	13	444	492	700	850	49	208
	14	407	444	670	810	37	226
_	15	472	611	710	820	139	99
<u>₹</u>	16	471	610	700	888	139	90
<u> </u>	17	431	560	650	820	129	90
2	18	447	468	650	820	21	182
2	20	447	484	680	804	37	196
SYCAMORE (34)	21	431	496	690	856	65	194
્ડે	22	414	437	610	792	23	173
S	23	418	452	600	788	35	148
	24	430	458	580	780	28	122
	25	423	451	610	777	28	159
	26	424	482	690	816	58	208
	28	401	464	660	782	62	196
	29	452	473	690	787	21	217
	31	431	466	660	725	35	194
	32	411	527	640	739	116	113
	33	455	513	700	780	58	187
	34	N/A	N/A	700	781	N/A	N/A
	35	437	527	700	800	90	173
	36	454	496	600	820	42	104
	37	452	479	540	820	27	61
	38	487	525	860	1270	38	335
	Avg	443	496				·

READINGS	STATIC LEVELS			PUMPING LEVELS			
END OF	N. CANAL	SYCAMORE	TEJON	N. CANAL	SYCAMORE	TEJON	
NOV-21	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	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-22	448	443	514	489	496	569	
CHANGE TO-DATE	-14	-14	-13	-1	-13	-22	

OUT OF SERVICE (8)
AIRLINE FAILURE (12)
FAILED (2)
86 TOTAL WELLS

^{*}Bowl depth measured to top of pump

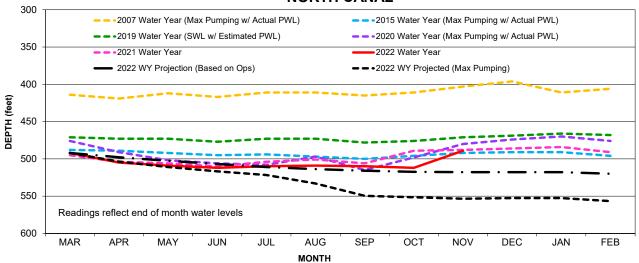
^{*}Pumping levels are estimated based on previous draw down records. (6 month average)

^{*}Airline failure levels were obtained with acoustic sounder

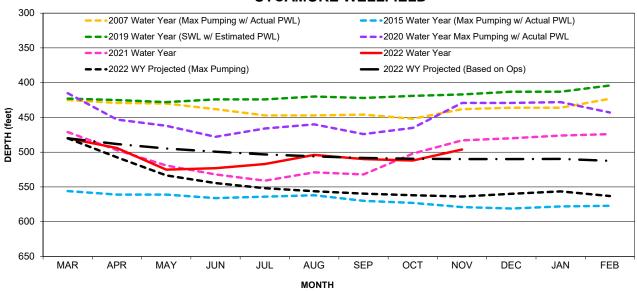
EXHIBIT "H-2" ARVIN-EDISON WATER STORAGE DISTRICT

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





SYCAMORE WELLFIELD



TEJON WELLFIELD

