



# Cost Analysis: Proposed Imported Water Pipeline Project

---

June 10, 2024

- Section 1 Executive Summary
- Section 2 Key Inputs and Assumptions
- Section 3 Key Results
- Section 4 Supplemental Data

# Section 1 Executive Summary

# Clean Energy Capital

- Clean Energy Capital (“CEC”) is a municipal advisor specialized in water project financing.
- Over the past 15 years, we have developed multiple independent cost evaluations for water infrastructure projects in California.
- We have additionally supported the financing and implementation of water projects and have familiarity with the major forms of public, private, and capital markets financing.
- We are a registered Municipal Advisor with the SEC and the MSRB, and bear a fiduciary obligation to our municipal clients.

# Scope of Engagement / Definition of Project

- The Indian Wells Valley Water District (the “District”) engaged CEC in 2024 to develop a cost estimate and cost scenarios for the proposed Imported Water Pipeline Project (the “Project”).
- The Project is a proposed conveyance facility (pipeline, pump stations, storage tanks, and appurtenant facilities) to convey treated water from an Antelope Valley-East Kern Water Agency (“AVEK”) pipeline in California City to a new Terminus Tank in the vicinity of Ridgecrest.
- The Project was originally identified in a Groundwater Sustainability Plan published by the Indian Wells Valley Groundwater Authority (the “GA”) in 2020.
- The Project is currently under development by the GA.

# Sources of Information

- Construction and operating cost inputs were drawn primarily from the PDR.
  - Cost estimates for the Project have recently been set forth in the October 2023 Preliminary Design Report developed for the GA by Provost & Pritchard Consulting Group (the “Provost & Pritchard PDR”).
  - We note that Krieger & Stewart has reviewed these estimates and finds them reasonable.
  
- CEC has worked with District staff to quantify and include additional Project components:
  - Cost of water acquisition,
  - Costs of upstream conveyance to the AVEK pipeline in California City, and
  - Costs of downstream integration of the new water supply into District facilities.
  
- CEC has developed an illustrative project timeline, plan of finance, and financial inputs such as borrowing cost and rates of escalation.

## ■ Proforma Financial Model

- Cost of water estimated are derived from an excel-based proforma financial model (the “Proforma Model”) developed by CEC.
- The Proforma Model sets forth inputs and assumptions, mathematical calculations, and quantitative results. It is fully transparent.

## ■ Water Unit Cost

- We define Water Unit Cost as the all-in cost per acre foot for delivered water, expressed in 2024 dollars.
- We calculate Water Unit Cost as the present value of the cost of water in the first year of Project operations (assumed to be 2030).

## ■ No Estimate of Ratepayer Impact

- Our analysis looks are the cost of water delivered via the Project, in \$/AF and \$million per annum
- We have not undertaken a cost allocation to District ratepayers and potential third parties, pending further development and specification of allocation alternatives

# Limitations of Analysis

- Limited independent review of development and construction cost inputs
  - Clean Energy Capital has relied on the accuracy of information set forth in the PDR and provided to us by the District.
  
- No guarantee of results
  - In supplementing the information provided to us, CEC has made estimates that we consider reasonable.
  - We have taken care to produce a mathematically accurate analysis.
  - Our assumptions and computations have been set forth fully and transparently in our work product.
  - We are, however, unable to guarantee our cost estimates, as actual costs will be subject to factors beyond our control.
  
- No review by the Groundwater Authority
  - While the District has provided a draft of our analysis to the Groundwater Authority, we have not received comments from the Groundwater Authority, and our analysis does not incorporate their feedback.



# Initial Findings – Unit Cost of Water

## Unit Cost of Water (2024\$/AF)

As a function of Annual Water Volume and WRDA Grant Funding

	Water Deliveries: 1,500 AFY	Water Deliveries: 3,000 AFY	Water Deliveries: 6,431 AFY
WRDA Grant - \$0mm	18,916	10,734	7,124
WRDA Grant - \$150mm	12,488	7,520	5,625
WRDA Grant - \$307mm	6,750	4,586	4,143

### ■ Comparison to District's costs:

- District ratepayers pay an all-in cost of approximately \$2,100 / AF, inclusive of water production and facilities
- Current cost of water production alone may range from \$250 - \$350 / AF

# Initial Findings – Annual Cost of Water

## Annual Cost (2024\$)

As a function of Annual Water Volume and WRDA Grant Funding

	Water Deliveries: 1,500 AFY	Water Deliveries: 3,000 AFY	Water Deliveries: 6,431 AFY
WRDA Grant - \$0mm	\$28,373,000	\$32,202,000	\$45,817,000
WRDA Grant - \$150mm	\$18,732,000	\$22,560,000	\$36,176,000
WRDA Grant - \$307mm	\$10,125,000	\$13,759,000	\$26,642,000

### ■ Comparison to District's annual budget

- To provide a comparator for the above annual cost estimates, we note that the District's FY2024 budget includes \$12.5 million in operating costs, excluding payments to the GA

### ■ Capital versus O&M allocation

- The breakout of annual cost between Capital Cost (eligible for tax recovery) and O&M Cost (more typically recovered through rates) varies among scenarios
- For the middle scenario (3,000 AFY with \$150mm WRDA), approximately 56% of the Annual Cost is Capital Cost (Debt Service) and 44% is O&M.

## Section 2 Key Inputs and Assumptions

# Development and Construction Costs

Direct Costs of Imported Water Pipeline (2023\$000s)	Source	
Imported Water Pipeline (2023 \$000s)		
Pipeline Construction	158,830	PDR
SCE Service Procurement	10,000	PDR
Contingency	31,706	PDR
Costs as set forth in PDR	200,536	PDR
Land Mitigation	180	Indian Wells
Construction Water/Water Trucks	6,000	Indian Wells
Contingency - 20% on Additional Costs	1,236	Indian Wells
Planning/Design – 12.5% of Pipeline Construction Cost	19,854	Indian Wells
Construction Management & Inspection – 12.5% of Pipeline Construction Cost	19,854	Indian Wells
Direct Costs of Imported Water Pipeline (2023 \$000s)	247,660	

- We note that the escalated value of direct costs is approximately **\$307 million**

# Water Acquisition Costs

## ■ Table A Water Acquisition Rights

- Acquisition Cost of Table A water rights has been included as part of the Capital Cost of the Project
- The Acquisition Cost has been estimated by multiplying required water rights with an assumed unit cost of \$10,000/AF, as shown in the following table:

	<b>Water Deliveries: 1,500 AFY</b>	<b>Water Deliveries: 3,000 AFY</b>	<b>Water Deliveries: 6,431 AFY</b>
Annual Water Deliveries (AFY)	1,500	3,000	6,431
Reliability	60%	60%	60%
Water Rights to be Acquired (AFY)	2,500	5,000	10,718
Cost of Water Right (2023 \$/AF)	10,000	10,000	10,000
Cost of Acquisition (2023 \$000s)	25,000	50,000	107,183

# Upstream and Downstream Capital Costs

## ■ Upstream Capital Costs

- The current capacity of the California City Feeder is about 3,900 AFY which would be adequate should the Indian Wells import 1,500 or 3,000 AFY of water deliveries. In these cases, no additional upstream capital cost are modeled
- If Indian Wells needs to import 6,431 AFY of water deliveries, the current capacity of the California City Feeder would be inadequate and an additional 10 mile water transmission pipeline would need to be built
- Capital Cost of \$35mm (2023\$) has been estimated by Indian Wells for this 10 mile of pipeline and is included in the scenario of 6,431 AFY of water deliveries

## ■ Downstream Capital Costs

- Refers to the cost of pipeline and related infrastructure required for the District to receive and distribute water to retail users
- Capital Cost of \$15mm (2023\$) has been estimated by Indian Wells for this Retail Distribution Infrastructure
- Retail Distribution Infrastructure could be replaced by Injection Wells after undertaking detailed cost-benefit and technical feasibility analysis of the later option.

# Project Timing and Cost Escalation

- As the base year for cost inputs is 2023, the Development Costs have been escalated to beginning of the Construction Period and Construction costs have been escalated to the midpoint of the Construction Period

- Project Timing:

Proforma Model Assumption	Value
Commencement of Construction (Year)	2027
Construction Duration	3 years
Commencement of Operations (Year)	2030

- Escalation Rates:

Proforma Model Assumption	Value
Construction Cost Escalation Rate	4.0%
Electricity Price Escalation Rate	4.0%
Non-Electricity O&M Escalation Rate	4.0%
Present Value Discount Rate	4.5%

# Escalated Costs Including Water Acquisition

	Water Deliveries: 1,500 AFY	Water Deliveries: 3,000 AFY	Water Deliveries: 6,431 AFY	Source
Imported Water Pipeline (2023 \$000s)	247,660	247,660	247,660	
Upstream Costs (2023 \$000s)	-	-	35,000	Indian Wells
Downstream Costs (2023 \$000s)	15,000	15,000	15,000	Indian Wells
Water Rights (2023 \$000s)	25,000	50,000	107,183	Indian Wells
<b>Capital Cost (2023 \$000s)</b>	<b>287,660</b>	<b>312,660</b>	<b>404,843</b>	
Escalation from 2023 to 2024 (\$000s)	11,506	12,506	16,194	CEC
<b>Capital Cost (2024 \$000s)</b>	<b>299,166</b>	<b>325,166</b>	<b>421,037</b>	
Development Cost Escalation (\$000s)	8,792	12,039	20,244	CEC
Construction Cost Escalation (\$000s)	44,155	44,155	49,976	CEC
<b>Escalated Capital Cost (\$000s)</b>	<b>352,113</b>	<b>381,360</b>	<b>491,257</b>	



# Plan of Finance

## ■ Development Period

- Funded by GA from grants to date
- Capitalized into Project costs going forward

## ■ Construction Period

- Capital Cost along with Interest During Construction (IDC), Costs of Issuance, and Debt Service Reserve Fund to be funded with WRDA Grant, WIFIA, and Senior Debt
- WRDA Grant – Key input variable, ranging from \$0 - \$307 million
- WIFIA Loan – Maximum 49% of total capitalization, 30 years amortization period, and 4.00% rate of interest (Note that total Federal funding cannot exceed 80%)
- Senior Debt – As needed to complete Project capitalization, 30 years amortization period, and 5.00% rate of interest

## ■ Operations Period

- Funded through revenues from operations

# Sources and Uses of Funds – \$150mm WRDA Grant

	Water Deliveries: 1,500 AFY	Water Deliveries: 3,000 AFY	Water Deliveries: 6,431 AFY
<b><u>Sources of Funds</u></b>			
Initial WIFIA Loan	186,109	203,369	268,226
Additional WIFIA Loan for IDC	11,167	12,202	16,094
Senior Debt	43,706	61,670	129,174
WRDA Grant	150,000	150,000	150,000
Total Sources of Funds	390,982	427,242	563,494
<b><u>Uses of Funds</u></b>			
Escalated Development and Construction Cost	352,113	381,360	491,257
Capitalized IDC - WIFIA Loan Interest	11,167	12,202	16,094
Capitalized IDC - Senior Debt Interest	6,556	9,251	19,376
WIFIA Loan DSRF	11,408	12,467	16,442
Senior Debt DSRF	2,843	4,012	8,403
Costs of Issuance	6,894	7,951	11,922
Total Uses of Funds	390,982	427,242	563,494

# Operations and Maintenance Costs

## ■ Methodology

- Cost inputs have been sourced from Preliminary Design Report and District's cost estimate worksheet
- As the base year for Cost inputs is 2023, the O&M Costs have been escalated to the first year of operations (2030) using an escalation rate of 4%
- Placeholders have been put for costs that are identified but not yet estimated

## ■ Major Cost Heads

- Electricity Cost – Arrived by multiplying the unit rate with the energy consumption per AF of water delivery
- Staff Cost – Arrived by multiplying number of full-time staff equivalents with the annual salary per staff (including all benefits)
- Repair and Maintenance – Estimated at 1.5% of the Capital Cost
- Contingency and Miscellaneous – To account for any unforeseen variations in the cost heads and costs not identified in the estimates

# AVEK Charges

- The Project will convey treated water from the AVEK pipeline in California City to a new Terminus Tank in the vicinity of Ridgecrest.
- AVEK charges refer to the annual charges payable to AVEK for SWP water treated and transported by AVEK to that Project's entry point in California City.
- We estimate AVEK Charges of \$1,100 / AF in 2023 dollars, comprising:
  - \$752/AF Treated Water Delivery Rate as set forth in AVEK's published schedules
  - \$23/AF surcharge for supplementary infrastructure
  - \$325/AF additional charges to account for additional AVEK cost recovery
- We assume that AVEK will pay applicable State Water Project (SWP) charges and pass through these charges. The key components of the SWP charges are the Transportation Charge, Delta Water Charge and Water System Revenue Bond Surcharge (taken from TABLE B-24, SWP Bulletin 132-23, Appendix B). Subject to further review, we assume these charges are included in our all-in AVEK cost estimate.

# Operations and Maintenance Costs

	Water Deliveries - 1,500 AFY	Water Deliveries - 3,000 AFY	Water Deliveries - 6,431 AFY	Source
Imported Water Pipeline (2030 \$000s)				
Electricity Cost	589	1,178	2,526	PDR, Indian Wells
Repair & Maintenance	3,715	3,715	3,715	CEC Estimate
Staff Cost	1,579	1,579	1,579	CEC Estimate
Contingency and Miscellaneous	1,500	1,500	1,500	CEC Estimate
	7,383	7,972	9,320	
Upstream Conveyance (2030 \$000s)				
Electricity Cost	-	-	1,000	CEC Estimate
Repair & Maintenance	-	-	525	CEC Estimate
Staff Cost	-	-	526	CEC Estimate
Contingency and Miscellaneous	-	-	1,000	CEC Estimate
	-	-	3,051	
Downstream Infrastructure (2030 \$000s)				
Electricity Cost	-	-	-	Indian Wells
Repair & Maintenance	225	225	225	Indian Wells
Staff Cost	263	263	263	Indian Wells
Contingency and Miscellaneous	100	100	100	Indian Wells
	588	588	588	
SWP Charges (2030 \$000s)	-	-	-	Indian Wells
AVEK Charges (2030 \$000s)	2,170	4,341	9,305	Indian Wells
<b>Total O&amp;M Cost (2030 \$000s)</b>	<b>10,142</b>	<b>12,901</b>	<b>22,265</b>	

## Section 3 Key Results

# Annual Cost and Unit Cost of Water

D. Annual Cost in First Year of Operations (\$000s)					
Case 1 - Low Water Volume		Case 2 - Mid Water Volume		Case 3 - High Water Volume	
First Operating Year	2030	First Operating Year	2030	First Operating Year	2030
<b>Full Grant - \$307mm</b>		<b>Full Grant - \$307mm</b>		<b>Full Grant - \$307mm</b>	
Water Deliveries (AFY)	1,500	Water Deliveries (AFY)	3,000	Water Deliveries (AFY)	6,431
<u>Nominal Cost</u>		<u>Nominal Cost</u>		<u>Nominal Cost</u>	
Annual Cost (\$000s)		Annual Cost (\$000s)		Annual Cost (\$000s)	
O&M	10,142	O&M	12,901	O&M	22,265
Debt Service	3,043	Debt Service	5,016	Debt Service	12,430
Total (\$000s)	13,185	Total (\$000s)	17,918	Total (\$000s)	34,694
Unit Cost (Nominal \$/AF)	8,790	Unit Cost (Nominal \$/AF)	5,973	Unit Cost (Nominal \$/AF)	5,395
<u>Present Value Cost (2024)</u>		<u>Present Value Cost (2024)</u>		<u>Present Value Cost (2024)</u>	
Annual Cost (\$000s)		Annual Cost (\$000s)		Annual Cost (\$000s)	
O&M	7,788	O&M	9,907	O&M	17,097
Debt Service	2,337	Debt Service	3,852	Debt Service	9,545
Total (\$000s)	10,125	Total (\$000s)	13,759	Total (\$000s)	26,642
<b>Unit Cost (PV \$/AF)</b>	<b>6,750</b>	<b>Unit Cost (PV \$/AF)</b>	<b>4,586</b>	<b>Unit Cost (PV \$/AF)</b>	<b>4,143</b>
<b>Base Case Grant - \$150mm</b>		<b>Base Case Grant - \$150mm</b>		<b>Base Case Grant - \$150mm</b>	
Water Deliveries (AFY)	1,500	Water Deliveries (AFY)	3,000	Water Deliveries (AFY)	6,431
<u>Nominal Cost</u>		<u>Nominal Cost</u>		<u>Nominal Cost</u>	
Annual Cost (\$000s)		Annual Cost (\$000s)		Annual Cost (\$000s)	
O&M	10,142	O&M	12,901	O&M	22,265
Debt Service	14,252	Debt Service	16,478	Debt Service	24,845
Total (\$000s)	24,393	Total (\$000s)	29,380	Total (\$000s)	47,110
Unit Cost (Nominal \$/AF)	16,262	Unit Cost (Nominal \$/AF)	9,793	Unit Cost (Nominal \$/AF)	7,325
<u>Present Value Cost (2024)</u>		<u>Present Value Cost (2024)</u>		<u>Present Value Cost (2024)</u>	
Annual Cost (\$000s)		Annual Cost (\$000s)		Annual Cost (\$000s)	
O&M	7,788	O&M	9,907	O&M	17,097
Debt Service	10,944	Debt Service	12,654	Debt Service	19,079
Total (\$000s)	18,732	Total (\$000s)	22,560	Total (\$000s)	36,175
<b>Unit Cost (PV \$/AF)</b>	<b>12,488</b>	<b>Unit Cost (PV \$/AF)</b>	<b>7,520</b>	<b>Unit Cost (PV \$/AF)</b>	<b>5,625</b>

# Annual Cost and Unit Cost of Water (cont.)

## D. Annual Cost in First Year of Operations (\$000s)

Case 1 - Low Water Volume		Case 2 - Mid Water Volume		Case 3 - High Water Volume	
First Operating Year	2030	First Operating Year	2030	First Operating Year	2030
<b>No Grant</b>		<b>No Grant</b>		<b>No Grant</b>	
Water Deliveries (AFY)	1,500	Water Deliveries (AFY)	3,000	Water Deliveries (AFY)	6,431
<u>Nominal Cost</u>		<u>Nominal Cost</u>		<u>Nominal Cost</u>	
Annual Cost (\$000s)		Annual Cost (\$000s)		Annual Cost (\$000s)	
O&M	10,142	O&M	12,901	O&M	22,265
Debt Service	26,808	Debt Service	29,034	Debt Service	37,401
Total (\$000s)	36,950	Total (\$000s)	41,936	Total (\$000s)	59,666
Unit Cost (Nominal \$/AF)	24,633	Unit Cost (Nominal \$/AF)	13,979	Unit Cost (Nominal \$/AF)	9,278
<u>Present Value Cost (2024)</u>		<u>Present Value Cost (2024)</u>		<u>Present Value Cost (2024)</u>	
Annual Cost (\$000s)		Annual Cost (\$000s)		Annual Cost (\$000s)	
O&M	7,788	O&M	9,907	O&M	17,097
Debt Service	20,586	Debt Service	22,295	Debt Service	28,720
Total (\$000s)	28,373	Total (\$000s)	32,202	Total (\$000s)	45,817
<b>Unit Cost (PV \$/AF)</b>	<b>18,916</b>	<b>Unit Cost (PV \$/AF)</b>	<b>10,734</b>	<b>Unit Cost (PV \$/AF)</b>	<b>7,124</b>



## Section 4 Supplemental Data

# Additional Analysis

## ■ Downstream Delivery Alternatives

- CEC's cost estimate assumes water deliveries to District customers
- Alternative delivery options could include conveyance to a suitable reinjection site, and reinjection into the valley's groundwater basin

## ■ Potential Electricity Infrastructure Costs

- CEC's cost estimate assumes that electric power for pumping is purchased at prevailing rates for uninterrupted industrial supply
- Cost estimates do not include potential infrastructure investment requirements for energy delivery to the remote locations of pumping stations
- Environmental considerations, including the designation of Desert Tortoises as endangered, could increase electricity infrastructure (and other) Project costs

## ■ Renewal and Replacement Costs

- CEC's cost estimate assumes ordinary O&M costs, but does not include accruals for Project replacement at end of useful life
- While we consider this approach appropriate, a more conservative analysis could add R&R accruals to unit cost and annual cost estimates

# Water Resource Development Act (WRDA) Grants

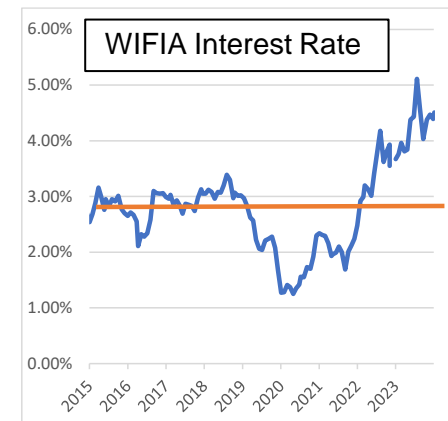
- **Water Resource Development Act (WRDA)**
  - Administered by US Army Corps of Engineers (USACE)
  - Provides cost-share grants and technical assistance to local governments and municipalities
  - Aims to develop water-related infrastructure that aid economic growth, flood and storm risk management, and ecosystem restoration programs
  - Originally started in 1992, bipartisan support for reauthorization every two years (Congress currently developing WRDA 2024)
- WRDA is annually appropriated to qualified projects by USACE
- No borrowing costs, repayment, or interest charges (grant funding)
- Grant size ranges from ~\$5M to \$300M+, average grant ~\$25M
- Imported Water Pipeline Project would likely be eligible for the Environmental Infrastructure (EI) Assistance program under WRDA

# IWVGA Borrowing Cost / Borrowing

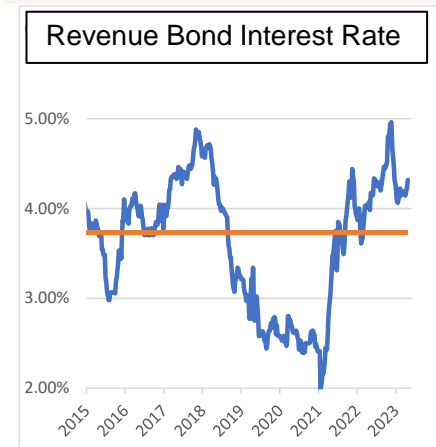
- The proposed WIFIA Loan and Revenue Bond issuance will require principal repayment with interest charges
  - WIFIA interest rate = 30-year US Treasury rate (as long as borrower has an investment grade credit rating; 'BBB-' or better)
  - Revenue Bond interest rate can be estimated using Revenue Bond Index (RBI) published by The Bond Buyer
- The RBI estimates the interest rate for revenue bonds issued by a 'AA'-rated entity
  - The rate can be adjusted using a premium to reflect the collective credit rating of IWVGA (all members)
  - We added a 0.50% premium to the RBI to estimate the interest rate of revenue bonds issued by IWVGA

- Both WIFIA and Revenue Bond rates for this analysis are estimated as the average of the current market rate and the 10-year historical average rate

IWVGA Member	Credit Rating
Indian Wells Valley WD	A+ (Fitch)
County of Kern	A1 (Moody's)
County of Inyo	No current rating
County of San Bernadino	Aa1 (Moody's)
City of Ridgecrest	No current rating



Estimated WIFIA Interest Rate		
	Rate	Weighting
Most Recent Rate	4.51%	50%
10-Year Historical Average	2.83%	50%
Weighted Average	3.67%	
Variance	-0.84%	



Estimated IWVGA Bond Interest Rate		
	Rate	Weighting
Indicative Current Market Pricing	4.50%	50%
10-Year Historical Average RBI	3.74%	50%
Weighted Average	4.12%	
Premium to reflect "BBB" Rating	+0.50%	
Adjusted Interest Rate	4.62%	
Variance	-0.38%	

# Water Volumes

- The Imported Water Pipeline Project contemplates an acquisition of Table A SWP water from SWP contractors
- Table A SWP water deliveries are subject to a reduced allocation by DWR depending on annual hydrological conditions
- Therefore, the actual SWP water yield to IWVGA per AF acquired is subject to varying reliability
- Historical delivery reliability average:
  - 1997-2024 = 58.9%
  - 2008-2024 = 44.4%
- Future delivery reliability estimates:
  - 2025-2035 = 60.0% (each year)

Year	% Allocation	Year	% Allocation
1997	100%	2011	80%
1998	100%	2012	65%
1999	100%	2013	35%
2000	90%	2014	5%
2001	39%	2015	20%
2002	70%	2016	60%
2003	90%	2017	85%
2004	65%	2018	35%
2005	90%	2019	75%
2006	100%	2020	20%
2007	60%	2021	5%
2008	35%	2022	5%
2009	40%	2023	100%
2010	50%	2024	30%

*\*Historical Table A Water Allocations from DWR*

# Groundwater Production Estimate

Water Use Sector (DWR)	Water User	No Action Baseline WY 2023		Reported Groundwater Pumping WY 2023		Estimated Groundwater Pumping WY 2023	
		note	(AFY)	note	(AFY)	note	(AFY)
Urban	IWVWD	2	6,628	1	4,266	3	5,443
Urban	City/County	2	425	1	35	3	173
Industrial	Searles Valley Minerals	2	2,907	1	2,514	3	2,575
Other - Federal	U.S. Navy	2	2,041	4	1,377	4	1,377
Agriculture	Meadowbrook Farms	2	12,303	1	3,642	1	3,642
Agriculture	Mojave Pistachio	2	6,891	1	3,523	1	3,523
Agriculture	Simmons Farm	2	931	1	0	1	0
Agriculture	Sierra Shadows	2	765	1	114	3	244
Agriculture	Quist Farms	2	685	1	272	3	489
Agriculture	Other Small Ag	2	957	1	151	3	211
Other - Co- Ops/Mutuals/Community	Other - Co- Ops/Mutuals/Community		544	1	150	3	634
Services District	Services District	2					
Other - Domestic	Domestic	2	832		0	2	832
			<b>35,909</b>				<b>19,141</b>

**Notes:**

- 1 Production reported to IWVGA for volumetric production fees and/or transient pool records. (Not all required pumpers report production.)
- 2 Estimated from GSP 'No Action' Baseline analysis.
- 3 Missing data estimated from best available data sources.
- 4 Data provided by Navy to the IWVGA via letter on November 7, 2023.

*Source: Attachment G, WY 2023 Draft Annual Report, GA*

# AVEK Charges

- The Imported Water Pipeline will convey treated water from AVEK pipeline in California City to a new Terminus Tank in the vicinity of Ridgecrest. AVEK charges refer to the annual charges payable to AVEK for SWP water treated and transported by AVEK to that point in California City
- The charges to be paid to AVEK have been taken from their published schedule
- Additional Charges amounting to 3% of the above charges have been added to account for Supplementary Infrastructure



## Water Delivery Rates & Charges

**FY 2024**

**Antelope Valley - East Kern Water Agency**

Effective July 1, 2023

### Municipal & Industrial Water Delivered to Customer Under Terms of Water Service Agreement

Treated Water Delivery Rate \$/Acre-Ft	Untreated Water Delivery Rate \$/Acre-Ft
752.00	518.00

### Agricultural Water Delivered to Customer Under Terms of Water Service Agreement from California Aqueduct through Customer-Owned Facilities

Untreated Water Delivery Rate \$/Acre-Ft
501.00

### Agricultural Water Delivered to Customer Under Terms of Water Service Agreement from Agency-Owned Facilities

Treated Water Delivery Rate \$/Acre-Ft	Untreated Water Delivery Rate \$/Acre-Ft
727.00	507.00

### Treatment & Delivery of Mojave Water Agency (MWA) Allocation

Treated Water Delivery Rate \$/Acre-Ft
1,822.00

### Municipal & Industrial Water Delivered to Acton Service Area

Treated Water Delivery Rate \$/Acre-Ft
805.00

# SWP Charges related to AVEK

- The SWP Charges allocated to AVEK have been taken from TABLE B-24, SWP Bulletin 132-23, Appendix B
- The key components of the SWP Unit Charge are Transportation Charge, Delta Water Charge and Water System Revenue Bond Surcharge
- For cost modelling purpose, all the charges mentioned are assumed to be variable and are charged according to the volume of water deliveries

*Note: It remains to be confirmed if these charges are in addition to the AVEK charges mentioned in the previous slide or these charges are included in the AVEK charges*

TABLE B-24 FZ Equivalent Unit Charge for Water Supply for Each Contractor<sup>1</sup>—FREEZE (in dollars per acre-foot)

Project Service Area and SWP Water Contractor	Transportation Charge					Delta Water Charge	Water System Revenue Bond Surcharge	Total Equivalent Unit Charge
	Capital Cost Component	Minimum OMP&R Component	Off-Aqueduct Component	Variable OMP&R Component	Total			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>FEATHER RIVER AREA</b>								
Yuba City	0.00	0.00	0.00	0.00	0.00	164.81	16.17	180.98
Butte	0.00	0.00	0.00	0.00	0.00	336.32	30.21	366.52
Plumas	40.82	8.34	0.00	0.00	49.16	70.95	9.86	129.96
Feather River Area	8.97	1.83	0.00	0.00	10.81	203.84	19.66	234.31
<b>NORTH BAY AREA</b>								
Napa	183.55	96.90	4.95	15.98	301.38	42.40	16.27	360.05
Solano	98.33	66.71	4.84	10.77	180.66	43.69	11.74	236.09
North Bay Area	127.92	77.20	4.88	12.58	222.58	43.24	13.31	279.13
<b>SOUTH BAY AREA</b>								
Alameda-Zone 7	141.94	69.73	9.12	22.18	242.98	43.64	8.86	295.48
Alameda County	31.15	36.26	7.38	14.13	88.91	30.19	4.71	123.82
Santa Clara	25.13	25.91	6.49	11.67	69.20	19.63	3.19	92.02
South Bay Area	45.18	34.75	7.06	13.79	100.79	25.27	4.36	130.42
<b>SAN JOAQUIN VALLEY AREA</b>								
Kings	6.72	10.20	3.89	8.64	29.45	36.31	3.80	69.56
Dudley Ridge	5.64	5.96	3.34	5.02	19.96	20.25	2.09	42.29
Empire	2.49	5.79	2.57	4.71	15.55	23.35	1.77	40.67
Kern	10.16	11.89	5.01	7.28	34.36	24.98	2.73	62.07
Oak Flat	2.37	3.20	2.05	3.29	10.91	21.76	1.78	34.45
Tulare	5.94	6.29	3.29	4.81	20.34	21.46	2.21	44.01
San Joaquin Valley Area	9.42	10.95	4.74	6.89	32.00	24.40	2.64	59.04
<b>CENTRAL COASTAL AREA</b>								
San Luis Obispo	570.75	389.59	17.05	109.54	1,086.94	249.85	60.65	1,397.44
Santa Barbara	1,242.93	336.65	20.50	95.10	1,694.99	100.32	75.27	1,870.58
Central Coastal Area	1,122.72	345.95	19.89	97.68	1,586.24	127.07	72.66	1,785.96
<b>SOUTHERN CALIFORNIA AREA</b>								
<b>AVEK</b>	<b>61.18</b>	<b>62.60</b>	<b>34.17</b>	<b>66.44</b>	<b>224.40</b>	<b>55.14</b>	<b>9.66</b>	<b>289.20</b>
Coachella	87.11	107.63	44.32	83.27	322.33	51.00	10.84	384.18
Crestline	178.83	174.37	37.88	78.68	469.76	85.72	21.27	576.75
Desert	55.83	60.68	53.79	44.91	215.21	32.46	7.13	254.80
Littlerock	109.48	111.07	33.14	64.41	318.11	96.13	16.64	430.88
Mojave	210.84	243.23	35.36	146.92	636.35	156.97	35.20	828.52
Palmdale	66.14	71.47	42.50	104.03	284.13	67.13	10.71	361.97
San Bernardino	347.35	243.81	31.58	86.57	709.30	93.24	24.61	827.15
San Gabriel	129.15	129.18	49.26	50.72	358.31	59.03	14.89	432.23
San Geronio	1,697.34	704.23	33.34	254.11	2,689.02	143.39	37.80	2,870.21
Santa Clarita	62.63	66.95	25.44	48.56	203.58	46.20	11.96	261.73
Metropolitan	94.04	82.64	40.02	46.58	263.29	48.08	11.35	322.73
Ventura	329.57	292.62	24.05	148.96	795.22	185.74	43.92	1,024.88
Southern California Area	100.57	88.43	39.59	51.46	280.06	50.72	11.83	342.60
<b>ALL AREAS</b>	<b>58.85</b>	<b>49.56</b>	<b>20.57</b>	<b>27.79</b>	<b>156.77</b>	<b>37.03</b>	<b>7.30</b>	<b>201.10</b>

<sup>1</sup> Hypothetical charges, which, if assessed on all Table A water delivered to date, all surplus water delivered prior to May 1, 1973, and all Table A water estimated to be delivered during the remainder of the project repayment period (Table B-5B), would provide a sum at the end of the period financially equivalent to all Transportation Charge and Delta Water Charge payments required under a water supply contract, considering interest at the Project Interest Rate, 4.580 percent per annum.