

Mohave Valley Irrigation and Drainage District

Water Conservation Plan 2024



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General Manager**

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Step 1 – Description of Contract Area

A. History

The Mohave Valley Irrigation and Drainage District (MVIDD or District) has been in existence for over 50 years.

The District is a special taxing district created under Title 48 of the Arizona Revised Statutes. The District was formed on December 23, 1963, under Mohave County Board of Supervisors Resolution Number 248.

The District is managed by a Board of Directors. Upon the District's formation, 3 directors were elected, 1 from each division. In 2004, the District increased the number of directors to 5. The board is currently comprised of one director from each of the 3 divisions and 2 at large. Elections are held in November and directors take office in January.



The District entered into its first U.S. Bureau of Reclamation (USBR) contract on November 14, 1968, in the amount of 51,000 acre-feet of Colorado River water (contract no. 14-06-W-204). This contract stipulated that a reduction of no more than 10,000 acre-feet of water could be made if the District does not include within its boundaries such areas of additional lands as may be satisfactory to the Secretary, and if facilities for providing water service to said additional lands and to the residents therein are not available. On July 7, 1982, the USBR entered into contract number 2-07-30-W0027 with Mohave County for said 10,000 acre-feet of Colorado River water. This contract was subsequently transferred to the City of Bullhead City on December 2, 1985. These transactions reduced the District's water entitlement under contract 14-06-W-204 to 41,000 acre-feet. Of the 41,000 acre-feet entitlement, 5,940 acre-feet are Present Perfected Rights (PPR) and 35,060 acre-feet are 4th priority water. Any unused PPR water is converted to 4th priority water on an annual basis.

On December 17, 2009, the District entered into sub-contract number 09-101 for the purchase of 1,000 acre-feet of Colorado River water from the Mohave County Water Authority. With the completion of this sub-contract, the District's total water entitlement rose to 42,000 acre-feet. On September 08, 2015, the District acquired an additional 250 acre-feet of 4th priority Colorado River water pursuant to MCWA-MVIDD subcontract 09-101, Amendment No. 1 and the District's total water entitlement rose to 42,250 acre-feet.

The District, as the contract holder, has the right to subcontract its entitlement to entities and individuals located within the District boundaries (excluding Fort Mohave Tribal Reservation Lands). This is carried out in compliance with District Policies and Arizona Department of Water Resources (ADWR) guidelines. The District has allocated water to agricultural, amenity, municipal, residential, industrial and commercial subdivisions and individual users within its boundaries.

The District uses water not only for agricultural irrigation, but also for M & I purposes. M & I use includes amenity (golf courses & man-made lakes), commercial entities, industrial uses, residential subdivisions and individual domestic users.

B. Location

The District is located in northwestern Arizona in Mohave County. The District lies along the Colorado River within the flood plain between the cities of Bullhead City, Arizona, to the north and Needles, California to the south.



The legal description of the District is as follows:

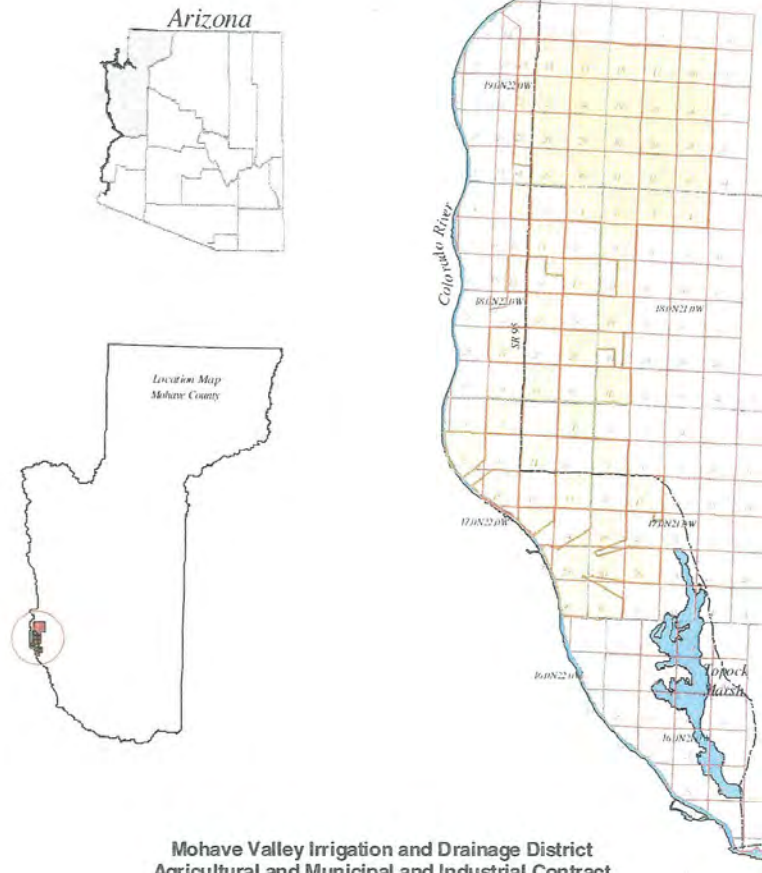
MOHAVE VALLEY IRRIGATION
and
DRAINAGE DISTRICT

District Boundary Description

Beginning at the northeast corner of Section 16, T.19 N., R.21 W., G.&S.R.B.&M.; thence southerly along the east line of Sections 16, 21, 28, and 33, T.19 N., R.21 W., to the southeast corner of said Section 33; thence southerly along the east line of Section 4, T.18 N., R.21 W., G.&S.R.B.&M., to the southeast corner of said Section 4; thence westerly along the south line of Sections 4 and 5 to the southwest corner of said Section 5; thence southerly along the east line of Sections 7, 18, 19, 30, and 31, T.18 N., R.21 W., to the southeast corner of said Section 31; thence southerly along the east line of Section 6, T.17 N., R.21 W., G.&S.R.B.&M., to the southeast corner of said Section 6; thence easterly along the south line of Section 5 to the southeast corner of said Section 5; thence southerly along the east line of Sections 8, 17, 20, 29, and 32, T.17 N., R.21 W., to the southeast corner of said Section 32; thence westerly along the south line of Sections 32 and 31, T.17 N., R.21 W., to the southwest corner of said Section 31; thence westerly along the south line of Section 36, T.17 N., R.22 W., to the easterly bank of the Colorado River; thence northerly following the meanderings of the easterly bank of the Colorado River to its intersection with the south line of the Fort Mohave Indian Reservation, said intersection lying in fractional Section 21, T.18 N., R.22 W, G.&S.R.B.&M.; thence ^{EA} westerly along the south line of the Fort Mohave Indian Reservation to its intersection with the west line of Section 22; thence northerly along the west line of Section 22 to the northwest corner of said Section 22; thence easterly along the north line of Section 22 to the southwest corner of fractional Section 15, T.18 N., R.22 W., G.&S.R.B.&M., thence northerly along the west line of fractional Sections 15, 10, and 3, T.18 N., R.22 W., G.&S.R.B.&M. to the northwest corner of said fractional Section 3; thence northerly along the west line of fractional sections


34, 27, 22 and 15, T.19 N., R.22 W., G.&S.R.B.&N., to the northwest corner of said fractional Section 15; thence easterly along the north line of fractional Section 15, 14, and 13, T.19 N., R.22 W. to the northeast corner of said Section 13; thence easterly along the north line of Section 18, 17, and 16, T.19 N., R.21 W., to the point of beginning. Except any portion of the above lying within the State of California.

Mohave Valley Irrigation and Drainage District



Mohave Valley Irrigation and Drainage District Agricultural and Municipal and Industrial Contract

Contract No. 14-06-W 204
Total Entitlement - 41,000 Acre Feet
1st Priority - 5,940 Acre Feet
4th Priority - 35,060 Acre Feet
5th and/or 6th Priority - 600 Acre Feet

 Mohave Valley Irrigation and Drainage District Contract Area

July 23, 2003
c:\gis\projects\bullhead.apr



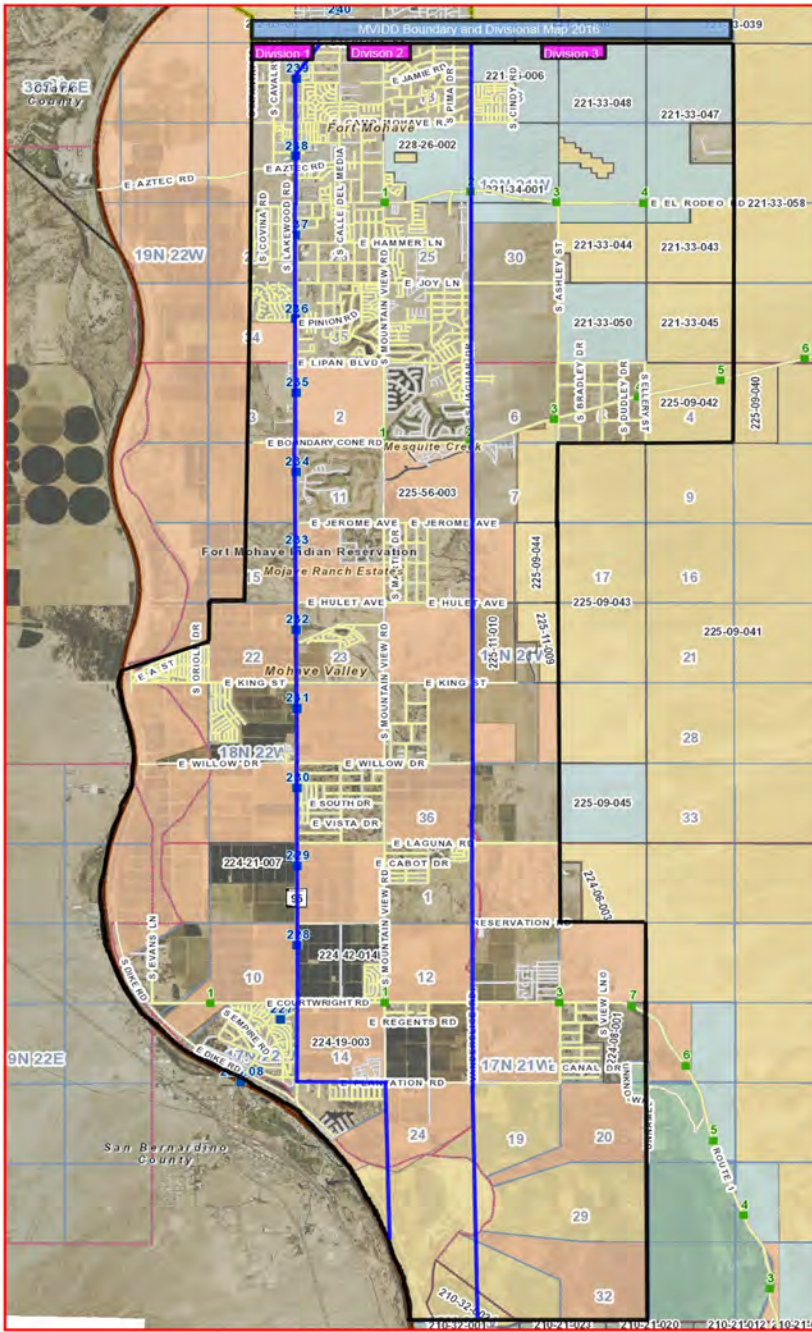
C. Size

The petition filed to form the District stated that approximately 57,000 acres were to be benefited by the District. This acreage included the lands of the Fort Mohave Indian Tribe, approximately 23,000 acres. Subsequent to the formation of the District petitioners, including the Fort Mohave Indian Tribe, requested and were granted exclusion from the District. Many years later, the petitioners requested and were granted inclusion into the District.

The District's current exterior boundaries encompass 54,551 acres. That acreage includes 23,064 acres that are part of the Fort Mohave Indian Tribe Reservation. This leaves 31,487 acres within the District Boundaries that are under the District's water reporting contract with the Bureau of Reclamation.



The total agricultural irrigable lands within the District at this time are approximately 4,500 acres. There are also 3 golf courses and 2 man-made lakes within the District.



- Legend**
- GVID#1 Admin. Infrastructure
 - District Office
 - Standpipe
 - Waterlines
 - ADOT Mileposts
 - COUNTY Mileposts
 - Sign Post Exists
 - Calculated Measure
 - Highways
 - Main Arterials
 - Collectors
 - Local
 - Railroad (greater than 1:200,000 scale)
 - Township/Range
 - Section
 - Surface Management
 - AZ Game and Fish
 - Bureau of Land Management
 - Bureau of Reclamation
 - City or County Parks
 - Indian Reservation
 - Military Reservation
 - National Parks
 - National Wildlife Refuge
 - Other
 - Private
 - State Parks
 - State Trust
 - US Forest Service
 - Water Lines
 - Sewer Lines
 - Named Washes



0 7,470.7 14,941.4 Feet
 (approximate scale)

Map Created: 10/19/2016 © 2012 Mohave County Information Technology

This map is a user generated static output from the Mohave County Interactive Map Viewer and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION, AS A LEGAL DOCUMENT, FOR PROPERTY DESCRIPTIONS, OR DETERMINATION OF LEGAL TITLE, AND SHOULD NEVER BE SUBSTITUTED FOR SURVEY OR DEED INFORMATION. The user agrees to comply with the Limitation of Use and the Assumption of Risk as stated in the full disclaimer at <http://gis.mohavecounty.us>

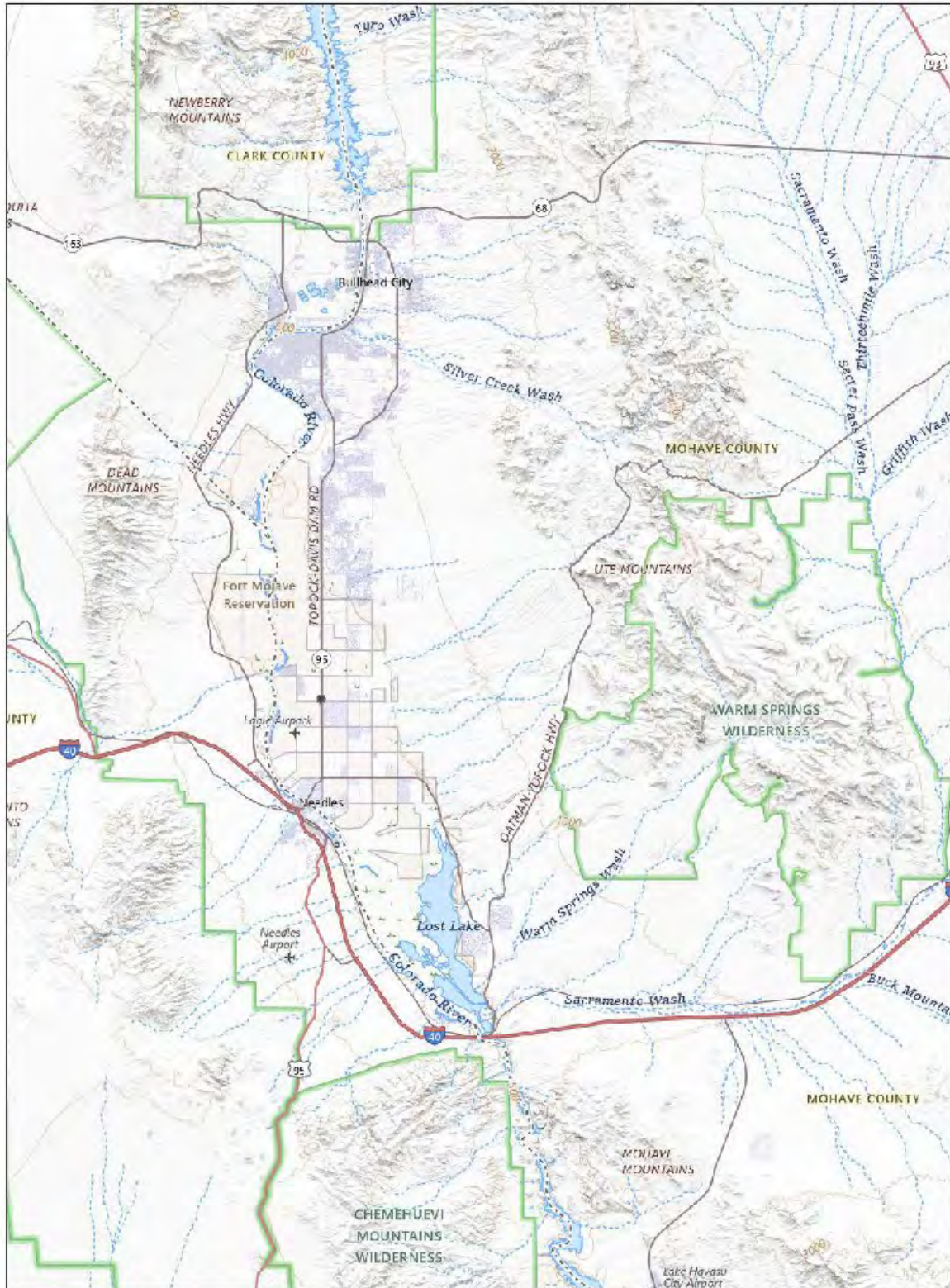
Notes:

D. Topography

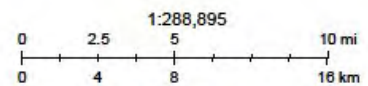
The topography of the District is primarily level to nearly level alluvium along the Colorado River. Some areas downgrade toward the river. The elevation is primarily 500 feet but rises to approximately 800 feet in the far northeast section of the District.



The National Map Advanced Viewer



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USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGERLine data;

E. Soils

Soils within the District consist of a variety of compositions. Over 50% are considered “Prime Farmland if Irrigated.”

Table 1.0*

Soil Type	Slope Percent	Percent of District	Drainage	Infiltration Rate	Irrigation Limitation	Farmland Rating
Carrizo -River wash Complex	3 - 8	9.6%	Excessively drained	High	Very limited	Not prime
Chuckawalla - River bend Complex	2 - 15	15.7%	Well drained	Moderate	Very limited	Not prime
Coolidge-Denure families complex	1 - 7	4.9%	Well drained	Moderate	Very limited	Not prime
Gadsden silty clay	0 - 1	3.0%	Well drained	Very slow	Somewhat limited	Prime if irrigated
Holtville silty clay	0 - 1	10.0%	Well drained	Very slow	Very limited	Prime if irrigated
Huevi very gravelly loam	2 - 15	0.3%	Well drained	Moderate	Very limited	Not prime
Huevi very gravelly loam	10 - 40	0.4%	Well drained	Moderate	Very limited	Not prime
Indio silt loam	0 - 1	12.6%	Well drained	Moderate	Very limited	Prime if irrigated
Kofa silty clay	0 - 1	4.2%	Well drained	Slow	Very limited	Prime if irrigated
Lagunita sand	0 - 1	17.0%	Excessively drained	High	Very limited	Not prime
Meloland very fine sandy loam	0 - 1	2.9%	Well drained	Slow	Somewhat limited	Prime if irrigated
Ripley silt loam	0 - 1	11.0%	Well drained	Moderate	Very limited	Prime if irrigated
River bend very cobbly sandy loam	2 - 15	1.4%	Excessively drained	High	Very limited	Not prime
Rositas superstition family and torriorthents soils	1 - 60	5.8%	Well drained	High	Very limited	Not prime

* Source of information from N.R.C.S. (See appendix A for soils maps.)

F. Natural Environment

Vegetation –

The District lies within two biomes. The majority of the District lies within the Mohave Desert scrub biome. The southwest portion of the District lies within the Lower Colorado River Sonoran Desert scrub biome.

- Mohave Desert Scrub Biome - This biome consists primarily of creosote bush, brittlebush, diamond cholla, beavertail cactus, white bursage, Mormon tea, catclaw acacia, desert lavender, bebbia, ratney, and desert milkweed.
- Lower Colorado River Sonoran Desert Scrub Biome - This biome consists primarily of creosote bush and white bursage. These are two of the most drought resistant plants in America. Annual plant species comprise over 50% of the vegetation. They are mostly winter growing species.

Wildlife –

The abundance of wildlife or lack thereof, is in direct correlation to the amount and type of vegetation available. There are several types of mammals known to inhabit the area including several small species of mice, desert woodrat, coyote and desert bighorn sheep. Overall densities of these mammals are expected to be low.

There are approximately 25 species of birds that could potentially inhabit the area, and they include the verdins, black-throated sparrows, and black-tailed gnatcatchers. Overall, the densities of bird populations are expected to be low.

The area also has many reptile species. These include the side-blotched lizard, western brush lizard, and the Mohave rattlesnake.

In 1995, the U.S. Department of Interior and the States of Arizona, Nevada, and California entered into a Memorandum of Agreement and a Memorandum of Clarification for the development of a Lower Colorado River Multi-Species Conservation Program (LCRMSCP). The LCRMSCP is a partnership between federal, state, tribal, and other public and private stakeholders with an interest in managing water and related resources within the Lower Colorado River Basin. The partnership is pursuing an ecosystem-based approach to developing the LCRMSCP for interim and long-term compliance with applicable endangered species and environmental laws. The District is a participant in this program.

G. Cultural Resources

The District encompasses 54,551 acres of land within its external boundaries. The Fort Mohave Indian Reservation has 23,064 acres of land within the boundaries of the District.



H. Climate

The average annual temperature for the District is above Arizona and the national average. The average precipitation is below Arizona and the national average. The average annual humidity is below Arizona and the national average. The average wind speed is above Arizona and the national average. The climate in the District is hot, dry, and windy.

Table 1.1*

Month	Temperature Average Daily Maximum	Temperature Average Daily Minimum	Precipitation Average (Inches)
January	64.9	44.1	1.02
February	69.2	46.7	1.33
March	78.6	53.2	0.62
April	86.2	59.5	0.23
May	94.9	68.2	0.11
June	104.9	78.2	0.03
July	108.2	84.7	0.31
August	106.4	83.2	0.35
September	100.3	75.6	0.35
October	87.3	63.1	0.47
November	73.9	51.9	0.47
December	62.7	43.3	0.70
Annual	86.4	62.4	5.99

*Source of information from en.climate-data.org for the Mohave Valley, AZ area. Compiled for the period 1991 – 2021 Min. Temperature, Max. Temperature, Precipitation / Rainfall.

I. Water Supplies

A summary of the water supplies available within the District service area is detailed in the following tables.

**Water Sources
Table 1.2**

Water Source	2005 Acre-Feet	2013 Acre-Feet	2018 Acre-Feet	2023 Acre-Feet
Reclamation Water Contract	41,000	41,000	41,000	41,000
Local Surface Water	0	0	0	0
Groundwater	0	0	0	0
Bella Vista/ MCWA Contract	0	380	0	0
MCWA Contract 2009	0	1,000	1,250	1,250
Reclaimed Water	151*	206 *	255**	325 **
Other Water	0	0	0	0
Total	41,151	42,586	42,505	42,575

*Information provided by EPCOR

** Information provided by Bella Vista

All other information provided from District records

**District Contract Detail
Table 1.3***

Water Source	Acre-Feet per Year	Contract No.	Notes
Reclamation Water Contract	41,000	14-06-W-204	The District has 8 PPR contracts.
MCWA Contract 2009	1,250	09-101 Amendment 1	None

*Source of information from District records.

There are no ground water basins, ground water recharge areas, or conjunctive use programs currently in place within the District’s boundaries. All water is considered Colorado River water except for a limited amount of reclaimed water. Reclaimed water uses within the District has been steadily growing since 2000. However, the lack of M & I development, and thus influent to the wastewater treatment plants, has limited the amount of reclaimed water available for re-use. The ability to deliver effluent to potential customers has been difficult due to the associated infrastructure costs. The District continues to explore options that would

reduce the infrastructure costs associated with these supplies to make this supply a more affordable alternative to potential customers.

The District itself does not own, operate, or maintain any wells. All wells within the District's boundaries are owned, operated, and maintained by non-District entities. These entities include utility companies, farmers, golf courses, and individually owned wells within the District. The owners of these facilities have their own operating and maintenance guidelines that they follow to ensure that their facilities are operating appropriately and not causing undo waste of a limited resource. The operations and maintenance of these facilities as well as the costs associated with the operation, maintenance, and capital improvements to these facilities are the responsibility of their respective owners.



A summary of the wells located within the District and owned by utility companies, amenity users, industrial users, and agricultural users is included in the table below. The District also has approximately 1,547 individual exempt wells within the District's boundaries. This information obtained from ADWR is included as Appendix B.

**Well Information
Table 1.4***

Name	MVIDD Well Site #	ADWR No.	(T, R & S)	Pumping Averages (gpm)
Camp Mohave (BHC Utilities)	Camp	55-559559	19N 22W 22	150
Lake Cimarron Primary (EPCOR)	Lake Cimarron	55-604160	18N 22W 23	190
Lake Cimarron Secondary (EPCOR)	Lake Cimarron	55-604161	18N 22W 23	225
King Street (EPCOR)	King Street	55-603947	18N 22W 21	Inactive
Unit 17 Primary (EPCOR)	Unit 17	55-603949	18N 22W 27	500
Unit 17 Secondary (EPCOR)	Unit 17 Secondary	55-208170	18N 22W 27	300
Center Street (EPCOR)	Central	55-603946	18N 22W 21	Inactive
Meadowlark (EPCOR)	Meadowlark	55-603948	18N 22W 21	Inactive
Commercial Well (EPCOR)		55-603950	18N 22W 27	150
Unit 1 (EPCOR)	Unit 1	55-603951	18N 22W 35	250
Riding Club Well (EPCOR)	Riding Club Well	55-603952	18N 22W 35	200
Well 1 Joy Lane West (Utilities, Inc.)	UI Well 1	55-527191	19N 22W 35	500
Well 2 Las Estancias (Utilities, Inc.)	UI Well 2	55-600335	19N 22W 26	500
Well 3 Tierra Verde (Utilities, Inc.)	UI Well 3	55-600336	19N 22W 14	320
Well 4 Rainbow Acres (Utilities, Inc.)	UI Well 4	55-600337	19N 22W 23	250
Well 6 Joy Lane East (Utilities, Inc.)	UI Well 6	55-806426	19N 22W 36	450

Well 7 (Utilities, Inc.)	UI Well 7	55-532342	19N 22W 35	450
Well 8 (Utilities, Inc.)	UI Well 8	55-565030	19N 22W 23	450
Well 9 (Utilities, Inc.)	UI Well 9	55-215355	19N 22W 14	450
Well 10 (Utilities, Inc.)	UI Well 10	55-215356	18N 22W 01	1000
Curcio (FMTUA)	Curcio	55-532195	17N 22W 23	325
St. George (FMTUA)	St. George	55-600333	17N 22W 15	140
Unit 7 (Lagoon Estates)	Unit 7	55-536722	17N 22W 01	1600
Unit 4 (Lagoon Estates)	Unit 4	55-618835	17N 22W 01	360
Unit 2 (Lagoon Estates)	Unit 2	55-618836	17N 22W 35	250
Unit 2 (Lagoon Estates)	Unit 2B	55-618837	17N 22W 35	250
Vanderslice	5	55-626083	17N 22W 13	2330
WPI II-COL	2	55-617490	17N 22W 13	2540
H. Kai	4	55-604351	17N 22W 13	3735
Vanderslice	3	55-626084	17N 22W 13	1360
H. Kai	8	55-604353	17N 22W 09	3816
WPI-Hancock Farm AZ	7	55-626969	17N 21W 07	3420
Becknell	9	55-908667	17N 21W 07	3285
Tropicana Ranch	10	55-605579	17N 21W 07	2300
WPI-CAD Farm AZ	43	55-918957	17N 22W 01	1500
WPI-CAD Farm AZ	44	55-918958	17N 22W 01	3500
Green Acres Mohave, LLC	12	55-086484	17N 22W 03	4295
Green Acres Mohave, LLC	11	55-086485	17N 22W 03	4345
Sherrill Ventures	14	55-627537	17N 22W 03	3750
Sherrill Ventures	13	55-627538	17N 22W 03	3750
WPI-R3 Farm AZ	6B	55-627535	17N 22W 11	4000
Sherrill Ventures	6A	55-627534	17N 22W 11	4000

Green Acres Mohave, LLC	15	55-086486	18N 21W 31	2875
WPI-TAC Farm AZ	19	55-604158	18N 22W 27	2500
WPI-TAC Farm AZ	45	55-920407	18N 22W 27	2000
J. Kai	16	55-809993	18N 22W 27	2500
WPI-Jerome Farm AZ	37	55-626965	18N 22W 13	3780
WPI- 919 Farm AZ	25B	55-222859	18N 22W 13	1965
WPI- 919 Farm AZ	25A	55-617628	18N 22W 13	2000
WPI- 919 Farm AZ	23	55-617630	18N 22W 25	1400
WPI- 919 Farm AZ	21	55-220500	18N 22W 25	1455
WPI- 919 Farm AZ	17	55-535885	18N 22W 25	3650
WPI- 919 Farm AZ	18	55-545571	18N 22W 25	3800
J. Kai	24	55-222707	18N 22W 23	3000
J. Perkins	40	55-617625	18N 22W 25	3030
A & B Land Development	39	55-239079	18N 22W 25	1500
WPI- 919 Farm AZ	22	55-220598	18N 22W 25	1800
WPI- Hulet Farm	33	55-915803	18N 22W 23	3430
WPI- Hulet Farm	32	55-801701	18N 22W 23	1650
Pederson	38	55-621593	18N 22W 35	1000
Evans	SU3	55-507325	9N 23W 18	650
Kelley	36	55-586605	17N 22W 09	199
Evans	34	55-916516	17N 22W 09	116
Evans	35	55-223050	17N 22W 09	125
Park	SU1	55-916738	18N 22W 35	285
Los Lagos	26	55-533096	18N 22W 01	1890
Marina Coves	1	55-204646	17N 22W 23	1000
Bella Vista	27	55-528553	18N 22W 01	1260
Bella Vista	28	55-920856	18N 22W 01	400
El Rio Golf	31A	55-201435	18N 22W 11	2000
El Rio Golf	31B	55-201434	18N 22W 11	
Willow Springs Golf	41	55-604159	18N 22W 27	50
Black Mountain Farms -Industrial	46	55-921491	18N 21W 19	100

Willow Valley Golf	42	55-581451	18N 22W 27	400
KOW Properties II	47	55-810102	18N 22W 15	100
Boys and Girls Club	48	55-925975	19N 22W 23	< 35 GPM
The Gravel Pit	49	55-930667	18N R21W 31	8
Crossroads RV Park	50	55-509385	18N 21W 05	14

*Source of information from six utility companies and individual well owners.

J. Water Uses

The District allows for use of water not only for agricultural irrigation, but also for M & I purposes. M & I use include amenity (golf courses and man-made lakes), commercial entities, industrial, residential subdivisions, and individual domestic users. The table below details the water usage by category and shows the crops produced in the District.

Water Uses 2023*
Table 1.5

Type of Use	Acres	Percent of Water Used
Agricultural		60.17%
Alfalfa	1340.49	
Bermuda	156.27	
Rye Grass	6.25	
Wheat	157.01	
Sudan	83.80	
Vegetables	8.67	
Fallow	<u>2747.82</u>	
Sub-Total	4500	60.17%
M & I Amenity		
Utilities		25.35%
Amenity		9.62%
Other M & I		<u>4.85%</u>
Sub-Total		39.82%
Total		100%

* Source of information from District records.

The District climate includes high temperatures, windy conditions, and high TDS in the water supply. Due to the high winds and high temperatures, sprinklers have had varied success in the District. The challenges associated with using drip

irrigation is the inability to leach salts that accumulate near the soil surface and root zone. Finally, conversion to sprinklers and/or drip irrigation is relatively expensive given the crops that are grown in the District. Thus, agricultural irrigation methods have been largely limited to flood irrigation. Farmers in the area have found this to be the most practical, reliable way to irrigate crops.

Water Uses 2005 to 2023*
Table 1.6

Water Uses	2005 Acre-Feet	2013 Acre-Feet	2018 Acre-Feet	2023 Acre-Feet	Forecasted 2024 Acre-Feet
Agricultural	25,808	18,877	31,356	9,324	12,953
Amenity	1,733	2,937	1,907	1,491	1,976
Other M & I	4,716	3,753	4,092	4,680	7,787
Recharge	0	0	0	0	0
Conservation	0	0	0	12,812	13,441
Total	32,257	25,567	37,355	28,307	36,157

*Source of information from District records.

2013 was an abnormally low year for water use due to a number of farms in the District that were for sale. These farms were acquired and brought back into production beginning in 2013 and 2014. 2023 water uses include conservation water of 12,812-acre feet and forecasted conservation of 13,441-acre feet for 2024. As of this report, about half of the farmland in the District is currently enrolled in the 2023-2025 LC System Conservation Program.

K. Storage

The District does not own, operate, or maintain any storage facilities itself. There are no tail-water recovery systems, recharge areas, or regulating reservoirs within the District. All storage facilities within the District's boundaries are owned and operated by non-District entities. The operations and maintenance of these facilities as well as the costs associated with the operation, maintenance, and capital improvements to these facilities are the responsibility of the landowners.

A summary of the storage facilities located within the District and owned by utility companies and amenity users is included in the table below.

Storage Facilities*
Table 1.7

Name	Type	(T, R, & S)	Capacity
Camp Mohave (BHC Utilities)	Reservoir	19N 22W 22	250,000
Lake Cimarron (EPCOR)	Reservoir	18N 22W 23	196,000
King Street (EPCOR)	Reservoir	18N 22W 27	163,000
King Street (EPCOR)	Reservoir	18N 22W 27	47,000
King Street (EPCOR)	Reservoir	18N 22W 21	96,000
El Rodeo 1 (Bermuda Water)	Reservoir	19N 21W 30	500,000
El Rodeo 2 (Bermuda Water)	Reservoir	19N 21W 30	500,000
El Rodeo 3 (Bermuda Water)	Reservoir	19N 21W 30	500,000
El Rodeo 4 (Bermuda Water)	Reservoir	19N 21W 30	500,000
Arroyo Vista 1 (Bermuda Water)	Reservoir	19N 21W 07	372,000
Arroyo Vista 2 (Bermuda Water)	Reservoir	19N 21W 07	372,000
FMTUA	Curcio	17N 22W 23	50,000
Bella Vista	Lake System	18N 22W 01	92,324,000
Marina Coves	Lake System	17N 22W 23	40,000,000

* Information provided by the six utility companies, Bella Vista and Marina Coves.

L. Distribution Facilities

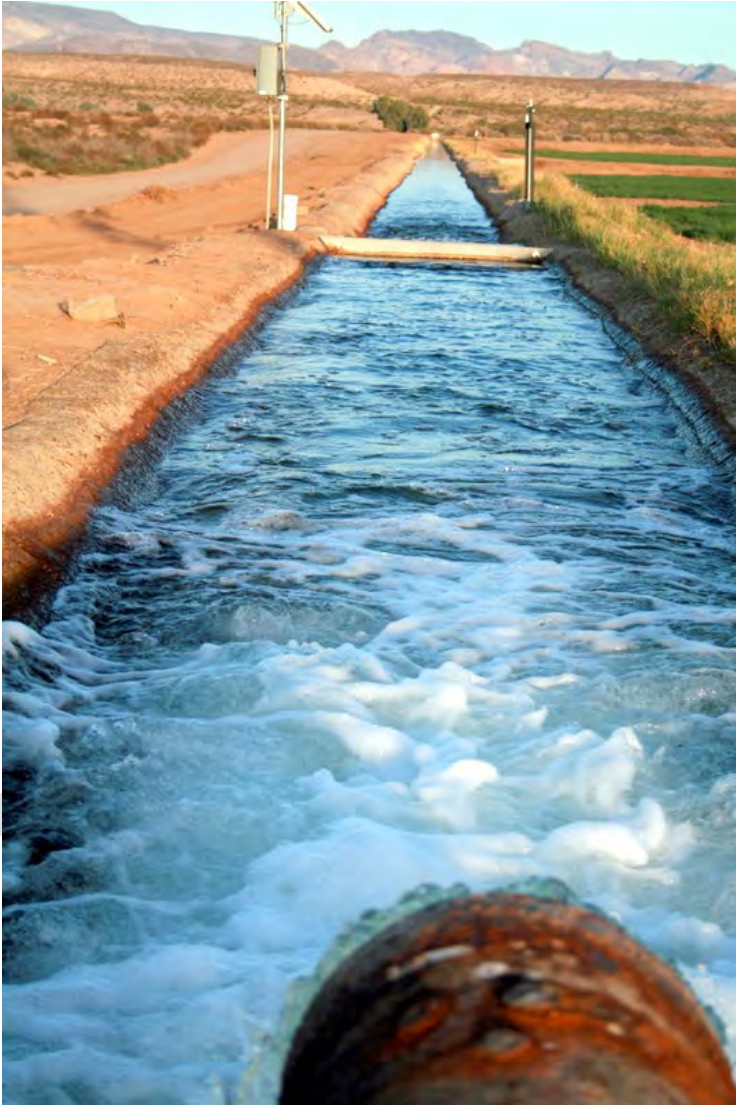
The District itself does not own, operate, or maintain any distribution facilities. All distribution facilities within the District's boundaries are owned and operated by non-District entities. The operations and maintenance of these facilities as well as the costs associated with the operation, maintenance, and capital improvements to these facilities are the responsibility of the landowners. These landowners have developed their own maintenance schedules to ensure that their facilities are operating appropriately and properly managing the available water supplies. Distribution facilities within the district include pipes, valves, and accessory facilities owned and operated by utility companies located within the District. They also include ditches, gates, and accessory facilities owned and operated by agricultural landowners within the District.

M. Drainage Facilities

The District does not own, operate, or maintain any drainage facilities. There are no drainage facilities (surface or sub-surface) that are located within the District's boundaries. Therefore, the District does not measure or sample water draining from the District. The District recognizes that there are return flows from the District to the Colorado River, but does not receive any credit for those flows. The District's diversion and beneficial use of Colorado River water is monitored by the Bureau of Reclamation and consumptive use is projected each year.

N. Water Measurement and Accounting Procedures

The District is responsible for the overall water measurement and accounting procedures associated with the service area. However, the 6 utility companies located within the District's boundaries are also under the jurisdiction of the Arizona Corporation Commission. The accounting procedures of each utility



company are the responsibility of the individual utility company. The utility companies' meter and bill their customers in accordance with their own policies and procedures. The District, in accordance with the Bureau of Reclamation (BOR) master contract, monitors water usage on a monthly basis, including usage by the utility companies. This information is provided to the BOR monthly.

The water users including agricultural, amenity, industrial and utility providers submit reports specifying the amount of water pumped from their respective wells during the previous month to the District on a monthly basis. The District has been monitoring and reading the agricultural flow meters and hour meters monthly since

2019. The District also calculates the amount of water used by non-metered, exempt wells within the District. All this data is then compiled into a single report that is transmitted to the BOR monthly.

The District also monitors the amount of water allocated within its service area. This water inventory shows the following allocations by classification.

Water Allocations*
Table 1.8

Type	Percent
Agricultural	74.91%
Amenity	4.68%
Commercial	2.42%
Subdivisions	14.56%
Unallocated	3.44%

*Source of information from District water inventory as of April 18, 2024.

The amenity classification above includes 3 golf courses and 2 man-made lakes. The District Policy 2009-02 passed on May 5, 2009, stipulates the District shall only allocate water to lands for permitted beneficial use and therefore believes that effluent should be the source of water for amenity users. The 3 golf courses and 2 amenity lakes currently have a water entitlement contract with the District through December 31, 2026. The District will no longer permit additional golf courses or amenity lakes to be developed using fresh water.

The District currently has 1,594 direct customers. This total includes 37 agricultural customers, 5 amenity customers, 6 utility companies (the 6 utility companies provide service to 12,273 customers), 4 customers classified as industrial, and approximately

1,547 exempt-well customers. The 36 agricultural customers have a water measurement system that has been approved by the Bureau of Reclamation and the District has a mandatory policy for District approved flow meters and hours meters on each of the agricultural well



sites. The 5 amenity customers are metered with MAG meters and the 6 utility customers meter their wells and customers themselves. The approximately 1,547 exempt-well customers are not metered, and the water usage is calculated by staff. The staff prepared several potential alternatives to calculating the exempt-well usage. The final analysis approved by the board was 375 gallons per day per household. This number coincides with ADWR guidelines for single-family residences water allocation.

Customers*
Table 1.9

Entity	Type	Number	Accuracy (percent)	Reading	Calibration	Maintenance
BHC - CM	5/8 x 3/4	57	100	Monthly	Upon request	Replace every 15 yrs.
BHC-CM	1	11	100	Monthly	Upon request	Replace every 15 yrs.
BHC-CM	1.5	2	100	Monthly	Upon request	Replace every 15 yrs.
BHC-CM	2	12	100	Monthly	Upon request	Replace every 15 yrs.
BHC-RVR	5/8	128	100	Monthly	Upon request	Replace every 15 yrs.
BHC-RVR	1	5	100	Monthly	Upon request	Replace every 15 yrs.
EPCOR-Unit 17 WV	3/4	5	100	Monthly	Upon request	Replace every 15 yrs.
EPCOR-Unit 17 WV	5/8	1447	100	Monthly	Upon request	Upon request/ Every 10 yrs.
EPCOR-Unit 17 WV	1	9	100	Monthly	Upon request	Upon request/ Every 10 yrs.
EPCOR-Unit 17 WV	1 1/2	3	100	Monthly	Upon request	Upon request/ Every 5 yrs.
EPCOR-Unit 17 WV	2	4	100	Monthly	Upon request	Upon request/ Every 5 yrs.
EPCOR-Unit 17 WV	3/4	4	100	Monthly	Upon request	Upon request/ Every 5 yrs.
EPCOR-Unit 17 WV	4	1	100	Monthly	Upon request	Upon request/ Every 5 yrs.
EPCOR-Unit 17 WV	6	3	100	Monthly	Upon request	Upon request/ Every 5 yrs.
EPCOR-Cimarron	3/4	1	100	Monthly	Upon request	
EPCOR-Cimarron	5/8	142	100	Monthly	Upon request	

EPCOR-Cimarron	2	3	100	Monthly	Upon request	
Sunrise Vista	¾ x 5/8	664	100	Monthly	Upon request	Upon request/ Every 10 yrs.
Sunrise Vista	1	3	100	Monthly	Upon request	Upon request/ Every 10 yrs.
Sunrise Vista	2	1	100	Monthly	Upon request	Upon Request / Every 10 yrs.
Bermuda Water	¾ x 5/8	6848	100	Monthly	Upon request	Upon request/ Every 20 yrs.
Bermuda Water	1	230	100	Monthly	Upon request	Upon request/ Every 20 yrs.
Bermuda Water	1.5	0	100	Monthly	Upon request	Upon request/ Every 20 yrs.
Bermuda Water	2	62	100	Monthly	Upon request	Upon request/ Every 10 yrs.
Bermuda Water	4 compound	2	100	Monthly	Upon request	Upon request/ Every 7 yrs.
Bermuda Water	6 compound	4	100	Monthly	Upon request	Upon request/ Every 5 yrs.
Lagoon Estates	3/4 x 5/8	362	100	Monthly	Upon request	Upon request/ Every 1.0 million gal.
Lagoon Estates	1	2	100	Monthly	Upon request	Upon request/ Every 1.0 million gal.
Lagoon Estates	2	11	100	Monthly	Upon request	Upon request/ Every 1.0 million gal.
Lagoon Estates	8	1	100	Monthly	Upon request	Upon request
FMTUA	¾ x 5/8	2,129	100	Monthly	Upon request	Upon request
FMTUA	¾ x ¾	0	100	Monthly	Upon request	Upon request
FMTUA	1	96	100	Monthly	Upon request	Upon request
FMTUA	1 ½	7	100	Monthly	Upon request	Upon request
FMTUA	2	0	100	Monthly	Upon request	Upon request
FMTUA	3	6	100	Monthly	Upon request	Upon request

FMTUA	4	6	100	Monthly	Upon request	Upon request
FMTUA	6	2	100	Monthly	Upon request	Upon request
MVIDD	Hour Meters	34	varies	Monthly	Upon request	Upon request

*Customer data provided by the six utility companies and District for the year ending 2023.

O. Water Pricing and Billing Practices

The District reviews and may adjust fees on an annual basis. This is completed as part of the budget process in the second quarter of the calendar year. The District may adjust fees other than annually, if necessary.

The District's fees **do not** include costs associated with the operation and maintenance of water production, storage, distribution, drainage, or recharge facilities. These facilities are owned, operated, and maintained by the landowners within the District. Costs such as electrical, chemicals, well and ditch maintenance, storage facility maintenance, distribution system maintenance, and capital improvement costs are born directly by the landowners and users within the District. The District pays none of these costs and as such they are **not** included in the rates and fees charged by the District.

Mohave Valley Irrigation And Drainage District Comprehensive Fee Schedule

Application Fees

Application Fee Non- Agricultural (Residential, Commercial) (Plus Allocation Fee)	\$200.00
New Agricultural, Amenity or Industrial Application (Plus per acre foot fee (1))	\$1,000.00
Contract Transfer (Plus per acre foot fee (2))	\$750.00
Interim ABU Water (Plus per acre foot fee (3))	\$1,000.00

Allocation Fees

Residential Lot	
Preliminary Allocation	\$500.00 per lot
Final Allocation	\$214.00 per lot
Apartment / Town Home	
Preliminary Allocation	\$600.00 per unit
Final Allocation	\$300.00 per unit
RV Park Space	
Preliminary Allocation	\$300.00 per space
Final Allocation	\$150.00 per space
RV Park Commercial	
Preliminary Allocation	\$1,200.00 per acre foot
Final Allocation	\$900.00 per acre foot
Commercial	
Preliminary Allocation	\$1,200.00 per acre foot
Final Allocation	\$900.00 per acre foot
Six (6) Month Temporary Allocation	\$50.00 per acre foot
(1) New Contract Fee	\$20.00 per acre foot
(2) Contract Transfer Fee	\$15.00 per acre foot
(3) Interim Water ABU Entitlement Fee	\$150.00 per acre foot per year
<u>Tax District Levy</u>	\$1.50 per acre per year

Allocation Administration Fees

Agricultural Water Entitlement Fee	\$4.00 per acre foot per year
PPR Administration Fee	\$1.00 per acre foot per year
Agricultural Water Supplement Fee	\$8.00 per acre foot per year
Interim Water Amenity Entitlement Fee	\$100.00 per acre foot per year
Industrial Water Entitlement Fee	\$100.00 per acre foot per year
Supplemental Interim Water Entitlement Fee	\$100.00 per acre foot per year
Water Utility administration Fee	\$4.00 per acre foot per year
Intergov Agreement Administrative Fee	\$1,900.00 Plus \$1.00 per acre foot per year
Water Allocation Extension Administration Fee	\$250.00 per extension
EC-ICS or System Conservation Administration Fee	\$5.00 per acre foot per contract Conservation Yield
EC-ICS or System Conservation Late Payment Fee	0.50% per month, or partial month of delinquency
AG to Commercial Administrative Processing Fee	\$750.00 Plus \$15.00 per acre foot one time fee per transfer
Res./Comm. Subdiv. Dev. Administrative Processing Fee	\$750.00 Plus \$15.00 per acre foot one time fee per transfer
NSF Check Fee	\$35.00
Late Payment Fee	10% of amount unpaid
Late Reporting Fee	\$100.00 For each month reported late
Water Order Deviation Penalty Fee	10% of the amount above or below 10% of the amount ordered
Mohave County Recordation Fee Reimbursement	\$30.00 per recordation

Effective July 1, 2024

Mohave Valley Irrigation and Drainage District Payment Rules

- 1) All application fees are due and payable with the application.
- 2) All fees are non-refundable.
- 3) Final allocations for residential and commercial subdivisions, will be approved upon final plat approval by the Mohave County Board of Supervisors.
- 4) Final Allocations for commercial and industrial developments, will be approved upon final site plan approval by the Mohave County Board of Supervisors.
- 5) All water entitlement contract holders shall be assessed the Water Entitlement Fee.
- 6) PPR holders must pay an administrative fee for the administration of the PPR water.
- 7) The PPR Administration Fee is charged on the proportionate share of the PPR Water.
- 8) PPR Administration Fees are payable in arrears.
- 9) PPR Administration Fees will be billed on or before January 31st for the preceding calendar year.
- 10) PPR Administration Fees are due by March 31.
- 11) PPR Water Entitlement orders must be submitted on or before August 15th of the year preceding the anticipated use. For example: water needed for the calendar year 2025 should be ordered by August 15, 2024. Orders placed after the due date will be placed at the bottom of the priority list and may not receive water as ordered.
- 12) Agricultural Water Entitlement Fees shall be paid on the entire amount of water allocation under contract.
- 13) Agricultural Water Entitlement fees are payable in arrears.
- 14) Agricultural Water Entitlement fees will be billed on or before January 31 for the preceding calendar year.
- 15) Agricultural Water Entitlement fees are due by March 31.
- 16) A 10% late fee will be assessed on all late payments. This fee will be assessed monthly until the bill is paid in full.
- 17) Agricultural Water Entitlement orders must be submitted on or before August 15th of the year preceding the anticipated use. For example: water needed for the calendar year 2025 should be ordered by August 15, 2024. Orders placed after the due date will be placed at the bottom of the priority list and may not receive water as ordered.
- 18) No application will be accepted from parties who have an outstanding balance owed to the district.
- 19) If a check is returned to the District as NSF, the party will be required to provide the District with a cashier's check as a replacement.
- 20) The District may make "Interim Water ABU" available for use on an annual basis. This Interim Water ABU may be contracted for on an annual basis until December 31, 2025. These annual contracts are not renewable. A contract holder

who wishes to extend their water use will be required to sign a new contract each year at the expiration of the expiring contract.

21) Interim Water ABU orders must be submitted on or before August 15th of the year preceding the anticipated use. For example: water needed for the calendar year 2025 should be ordered by August 15, 2024. Orders placed after the due date will be placed at the bottom of the priority list and may not receive water as ordered.

22) Interim Water ABU is the lowest priority water within the District. Therefore, it will be the first water reduced should the District be required to reduce the amount of water it has available.

23) The Interim Water ABU users are billed in advance.

24) Interim Water ABU Entitlement fees will be billed on or before January 31 for the calendar year of use.

25) Interim Water ABU Fees are charged and payable on the entire amount of water ordered. No credit is given for unused amounts. The user is charged for the amount of water reserved for their use.

26) Interim Water ABU used in excess of the amount ordered will be billed the Interim Water ABU Entitlement Rate plus the Supplemental Interim Water Entitlement Fee.

27) Interim Water ABU Entitlement fees are due by March 31.

28) Interim Water ABU is a temporary alternative source of water and is not intended to replace or become a permanent source of supply.

29) Interim Water Amenity orders must be submitted on or before August 15th of the year preceding the anticipated use. For example: water needed for the calendar year 2025 should be ordered by August 15, 2024. Orders placed after the due date will be placed at the bottom of the priority list and may not receive water as ordered.

30) All Interim Water Amenity water users are billed in advance.

31) Interim Water Amenity Entitlement fees will be billed on or before January 31 for the calendar year of use.

32) Interim Water Amenity Fees are charged and payable on the entire amount of water under contract. No credit is given for unused amounts. The user is charged for the amount of water reserved for their use.

33) Interim Water Amenity water used in excess of the amount under contract will be billed the Interim Water ABU Entitlement Fee.

34) Interim Water Amenity Entitlement fees are due by March 31.

35) Industrial Water orders must be submitted on or before August 15th of the year preceding the anticipated use. For example: water needed for the calendar year 2025 should be ordered by August 15, 2024. Orders placed after the due date will be placed at the bottom of the priority list and may not receive water as ordered.

36) Industrial Water Entitlement Fees shall be paid on the entire amount of water allocation under contract.

37) Industrial Water Entitlement fees are payable in advance.

38) Industrial Water Entitlement fees will be billed on or before January 31 for the calendar year of use.

- 39) Industrial Water used in excess of the amount under contract will be billed the Interim Water ABU Entitlement Fee.
- 40) Industrial Water Entitlement fees are due by March 31.
- 41) A 10% late fee will be assessed on all late payments. This fee will be assessed monthly until the bill is paid in full.
- 42) Utility Companies shall be billed in arrears.
- 43) Utility companies providing service within the District will be charged an administrative reporting fee for administration of the entitlements they deliver.
- 44) Amenity users that are parties to an Intergovernmental agreement shall be charged an administrative fee due and payable in advance.
- 45) System Conservation Administrative fees are payable in advance.
- 46) System Conservation Administrative fees will be billed on or before May 30th and due in full on July 30th.
- 47) System Conservation Administrative fees are charged and payable on the entire amount of Conservation Yield per contract.
- 48) System Conservation Administrative fees that are delinquent shall accrue interest at the rate of 0.5% per month, or partial month of delinquency.
- 49) System Conservation Administrative fees not paid shall result in a hold on the EC-ICS otherwise attributable to that Farm Unit and no delivery of that EC-ICS to that Farm Unit shall occur until the administrative fee, plus interest if applicable, is paid in full.
- 50) Entities requesting a water allocation extension shall pay an extension fee prior to the extension being granted.
- 51) Contract holders shall provide the District with a water order on or before August 15th of the year preceding the anticipated use. For example: water needed for the calendar year 2025 should be ordered by August 15, 2024.
- 52) If a water order is not received from a water contract holder by August 15th, the contract holder will be deemed to have ordered their full contract amount.
- 53) A water deviation fee shall be assessed on all orders that are more than 10% different than the amount ordered. For example: if 1,000 AF of water is ordered. There would be a penalty charged on amounts above 1,100 AF or below 900 AF of water actually used.
- 54) All water users are required to provide monthly water use reports in a form acceptable to the District.
- 55) All water users are required to provide the monthly water use information by the 10th of the month following its use. If the 10th falls on a holiday or weekend the information is due the day before the holiday or weekend. This information is required to be in the District office by the 10th or it is considered late.
- 56) AG to Commercial Administrative Transfer Processing Fee will be charged as a one-time fee per transfer for AG Water Entitlement Contract modifications for approved transfers to Commercial allocations within the District boundaries.
- 57) Residential/Commercial Subdivision Developer Non-refundable Allocation Fees that have been approved for transfer to a new development within the District boundaries, shall be charged a one-time Administrative Processing fee per transfer as set forth in the annual Comprehensive Fee Schedule. Refer to Resolution 2022-01.

58) Residential/Commercial Covenants, Conditions and Restrictions fees where applicable will be reimbursed to the District per recordation as set forth in the annual Comprehensive Fee Schedule.

Effective July 1, 2024

The District reviews and updates its fee schedule on an annual basis as part of its budget process.

P. Water Shortage Allocation Policies

Since the District was formed in 1963, it has never had an instance where it was unable to provide the amount of water requested from a contract holder. Thus, there was a high probability that the District would be able to continue to deliver water as ordered. However, with the increased probability of reduced snowpack/runoff in the Colorado River Basin and given the increased probability of water entitlement curtailments along the mainstem of the Colorado River post 2026, the District believes it is necessary to establish a policy for water shortage sharing within the District.

The District is currently discussing a Water Shortage Resolution. The Resolution is anticipated to state that if the District's water supply is curtailed, then the first water users that will be impacted are those holding Interim Water Contracts. If the District must reduce water deliveries further, then Agricultural and Amenity Water Contracts will be impacted. The Agricultural and Amenity Water Contracts will share proportionately in any reduction required through December 31, 2026. After December 31, 2026, the Amenity Contracts expire. The amenity users will then fall within the Interim Water Contracts category and/or begin using a new supply such as effluent. In either case, these amenity users' water allocation will be reduced to zero before any agricultural user reduction post 2026. The District is still working on the details of the proposed resolution.

Q. Operations and Maintenance Program

The District does not own, operate, or maintain any wells, storage facilities, distribution facilities, drainage facilities, tail-water recovery systems, recharge areas, or regulating reservoirs. All the aforementioned facilities that are present within the boundaries of the District are owned and operated by others. These include utility companies, farmers, golf courses, man-made lakes, and individuals. The operations and maintenance of these facilities as well as the costs associated with the operation, maintenance, and capital improvements to these facilities are the responsibility of their respective owners. These owners have developed their own maintenance schedules to ensure that their facilities are operating appropriately and not causing undue waste of a limited resource.

The District does inspect meter installations and irrigation ditches to confirm compliance with District Policies. In 2019, the District adopted Resolution 2019-01 to promote efficiency in irrigation and water conservation. The policy requires installation of water flow meters on all points of agricultural diversions. The District recognizes the importance for the most accurate water reporting within its boundaries.

The District established Resolution 2020-01 to establish rules for noxious weed abatement. As part of our conservation efforts, the District is obligated to control weeds and other noxious plants on the fields selected for fallowing. The District has determined that it is in the best interest to adopt these rules whether or not such fields or lands are enrolled in system conservation. See Appendix E for Resolution 2020-01.

District Policies

- a. Water Allocation Policy** – The District has water allocation policies for residential and commercial subdivisions, commercial and industrial projects, agricultural and individual parcels. The policies include the water allocation guidelines for timelines and amounts. See Appendix C for Resolution Number 2022-04 that Supersedes Resolution 2014-04.
- b. Water Order** – The agricultural, amenity, and industrial users in the District are required to provide their water orders for the succeeding year to the District by August 15 of the current year. District staff calculates the water needs for the utility customers as well as the exempt-well users. The water orders are then consolidated to create a water order. The water order is then sent to the BOR.
- c. Water Shut-Off Requests** – The District does not own or operate any wells, storage, or distribution facilities. The individual users own, operate, and maintain their own facilities. Since these facilities are owned and operated by the users, and they determine the timing of the operation of the facilities, there are no water shut offs by the District.
- d. Return Flow Policy** – The District does not have a policy regarding return flows. The District does not receive credit for return flows.
- e. Water Transfers** – The District has a Water Transfer Policy in place, which allows for the transfer of water from one user to another within the District. In July of 2018, the District passed Resolution 2018-04 to make water available outside District boundaries for a defined program period through a rotational land fallowing program approved by the District, the State of Arizona and the United States Department of the Interior. In 2023, the District passed Resolution 2023-01 to establish new and explicit policies and procedures to provide for the orderly transfer of part or all of an Agricultural Subcontract Entitlement to domestic use, this Resolution repealed Resolution 07-05 and replaced in its entirety by this new Resolution. After the District undertook a comprehensive inventory of water allocated to users within the District. That inventory shows that the District has allocated water very close to the maximum amount of water that the District may divert. In August 2022, the District Board voted to suspend all new allocations of water within the District. See Appendix D for Resolution Number 2018-04, 2023-01 and 2023-03.

Step 2 – Inventory Water Resources

A. Water Budget Tables

a. **District Water Supplies** - The water resources for the District include surface water and reclaimed water in the table below.

Monthly District Water Supply Data for 2023

Table 2.0

Month	Surface Water (Colorado River) (acre-feet) *	Ground Water	Reclaimed Water ** (acre-feet)	Precipitation ***	Total (acre-feet)	System Conservation Water Created ****
January	1,310	0	29	0.85	495	
February	1,375	0	26	0.25	1,031	
March	1,791	0	29	1.95	927	
April	1,904	0	28	0.00	1,727	
May	2,108	0	27	0.06	1,983	
June	2,291	0	25	0.09	1,663	
July	2,300	0	27	0.00	1,797	
August	2,353	0	27	1.09	1,665	
September	2,158	0	26	0.66	1,422	
October	1,605	0	27	0.00	1,353	
November	1,358	0	25	0.02	606	
December	1,045	0	29	0.02	826	
Total	21,597	0	325	4.99	15,495	12,812

*This is the amount of water ordered from the BOR for the calendar year 2023

** Reclaimed water used from EPCOR reported by Bella Vista for 2023.

***Precipitation is not included in the total water supplies for the District. Data for 2023 from Needles, Ca https://www.cnrfc.noaa.gov/monthly_precip.php

****System Conservation Water Created by MVIDD pursuant to SCIA No. 23-XX-30-W0770 dated August 16, 2023.

The table above shows that over 99% of the water supply for the District comes from its Colorado River water contracts. A minimal amount of water comes from reclaimed water.

b. **District Water Uses** – The District does not own, operate, or maintain any wells, distribution or storage facilities. The users own and operate their own facilities. The District has no water uses for canal seepage, evaporation, spills, or riparian

uses in canals since the District does not own or operate any of these facilities. There are agricultural and M & I water uses within the District. There are a number of developments and commercial projects within the District’s boundaries. Many of these developments are only partially completed. However, in accordance with ADWR Water Adequacy Policy once the property has a final plat, the water allocated to the development cannot be re-allocated for another use unless the final plat is abandoned. The District does have the ability to use the unused water on an interim basis until it is needed by the development. There are approximately 4,580 vacant lots within MVIDD with a permanent water entitlement, totaling 1,559-acre feet of water that is reserved for the District’s long-term population growth. This is enough water to accommodate an additional 10,500 more people.

Monthly District Water Usage Data for 2023

Table 2.1

Month	Agricultural (acre-feet) *	M & I (acre-feet)*	Ground Water Recharge	Water Exchange or Transfer	Reclaimed Water (acre-feet) **	Total (acre-feet)
January	88	407	0	0	29	495
February	620	411	0	0	26	1,031
March	477	451	0	0	29	927
April	1,258	469	0	0	28	1,727
May	1,421	561	0	0	27	1,983
June	1,086	577	0	0	25	1,663
July	1,118	680	0	0	27	1,797
August	1,066	599	0	0	27	1,665
September	795	627	0	0	26	1,422
October	847	506	0	0	27	1,353
November	113	493	0	0	25	606
December	435	391	0	0	29	826
Total	9,324	6,172	0	0	325	15,495

*Actual water pumped and reported to the BOR in 2023. Including MCWA Subcontract.

**Reclaimed water used from EPCOR reported by Bella Vista.

B. Quality of Water Sources

There is no water quality testing covering the entire District completed on a regular basis, except for those areas that the 6 utility companies serve within the District. The six utility companies are required by the Arizona Department of Environmental Quality (ADEQ) to sample their water systems on a regular basis and to report the results of the sampling to their customers annually.

Copies of the 2019 through 2023 Consumer Confidence Reports (C.C.R.) from the utility companies (Bermuda Water, Bullhead City Utilities, EPCOR, Sunrise Vista, Lagoon Estates, and FMTUA) are available upon request.

The water quality reports from the various utility companies indicate that water quality issues are primarily point-source pollution caused by seepage from septic systems and naturally occurring arsenic.



C. Water Uses within the District

The District allows M & I development within the District’s external boundaries. Many irrigation districts restrict water uses within their district boundaries to agricultural uses only.

Water Uses, Major Crops and Acreage For 2023
Table 2.2

Customer Type	Number of Customers	Crop	Acres	Water Used (acre-feet)
Agricultural	36	Alfalfa / Hay	1340.49	9,324
		Bermuda	156.27	
		Rye Grass	6.25	
		Wheat	157.01	
		Sudan	83.80	
		Vegetable	8.67	
Participating Acres in System Conservation		Fallow/Seasonal Crop	2,678	12,812
M & I (Bermuda Water)	7,144			3,043
M & I (Sunrise Vista)	672			161
M & I (BHC Utilities) CM & RVR	215			122
M & I (EPCOR) WV & Cimarron	1,617			262
M & I (Lagoon Estates)	379			96
M & I (FMTUA)	2,423			245
Other M & I (Exempt Wells)	1,547			641
Amenity	5			1,491
Other	4			111
Ground Water Recharge	0			0
Total	13,860			15,495

*Source for M & I use provided by the six utility companies. Other M & I include exempt wells within District.

D. Quantity and Quality of Drainage from the District

The District does not have a policy regarding return flows. The District does not receive credit for return flows.



Step 3 – Water Management Problems, Opportunities, and Conservation Goals

A. Describe the District’s Water Management Problems and Challenges

- 1) While the District manages the water entitlements within its boundaries, it has had some difficulty with the coordination of that process with Mohave County. Mohave County does not include the District in their planning and permitting processes for individual lots located outside of subdivisions. The District is working with Mohave County Development Services so that it may be notified when proposed projects are under review. This helps enable the District to identify if the proposed project has a Colorado River water entitlement for its proposed diversion.
- 2) The District continues to have no control over the drilling of wells within its boundaries. However, ADWR is now notifying the District when an Intent to Drill is submitted. It is estimated that there are over 1,547 exempt wells located within the District. As time goes on, this number could increase. The District continues to request that the landowners register their wells.

The District passed resolution 93-02, which requires prior approval of wells drilled within the District, but this resolution has not been recognized by ADWR. The District also passed resolution 2009-10 which requires the registration of wells with the District. This has also not been recognized by ADWR.

- 3) The District’s water entitlement is nearly fully allocated. In addition to the remaining water set aside for new M&I projects, the District has water allocated to platted but unbuilt subdivisions, totaling approximately 4,580 lots. Homes built on these lots will provide housing for approximately 10,500 new people. Beyond these supplies that are dedicated to accommodate possible population growth, the District continues to accommodate long-term growth through the market-based transfer of water from Agricultural to Urban uses.
- 4) The District passed resolution 2018-04 so that the District may undertake to develop a Rotational Land Fallowing Program designed to make water available outside District boundaries for a defined program period, but not in perpetuity. The District’s Board of Directors believe that such a Rotational Land Fallowing Program would, if properly structured and implemented, provide significant benefits to the agricultural landowners within the District while avoiding adverse impacts.

B. Describe the District's Water Management Goals

- 1) To continue to work with Mohave County Planning and Zoning as well as Development Services to allow any District's concerns to be addressed before the county approves a project for individual lots located outside of subdivisions within the District's boundaries.
- 2) To continue to work with ADWR to be notified when a new well is being drilled or modified in our District boundaries. This would help ensure that wells drilled in the state have a legal right to the water that they are pumping and the District can account for the water usage.
- 3) To continue to work with the Bureau of Reclamation on the District's participation in the Colorado River Lower Basin System Conservation to contribute to conservation of water supplies in Lake Mead and other Colorado River reservoirs in the Lower Basin.
- 4) To continue to monitor each agricultural wellsite for proper working flow meters and hour meters and replace as needed for the most accurate calculations in water use reporting on farms.



Step 4 – Existing Water Conservation Measures

A. List of the Practices and Expected Results That Were Identified and Implemented Previously

Practice	Expected Results
Continue to update the current water inventory	This would result in more accurate accounting of the District’s allocated water. This inventory is based on the parcel list provided by Mohave County Assessor’s office. This will continue to be updated monthly.
Continue to work with Mohave County P & Z on development projects in our District boundaries.	This would allow the District to advise the Planning and Zoning departments of any issues in regards to water allocations approved for or not yet applied for. This would more accurately account for allocated water.
Continue to work with the public and local realtors.	This would allow the District to continue to inform both individuals and local realtors of current water allocations to parcels of land in the District that are being sold and or purchased for development.
Continually monitor Agricultural Wellsite Flow Meters and Hour Meters	Through the monthly monitoring of flow meters and hour meters, the District obtains the most accurate water reporting for on farm water use. These meters are replaced on a as need basis by the District.
Compensated Water Conservation on Farms	Farmers continue to participate in voluntary, compensated water conservation such as rotational fallowing and seasonal fallowing programs. The economic incentives associated with these programs are encouraging water conservation.

B. Description of the Actual Program Design and Results of Practices That Were Implemented

Program Design	Results
River Water Pump Station: The water metering program that District was planning on implementing for the River Water Pump Station.	The District applied for a grant for the preliminary engineering of a River Water Pump Station, however, due to a lack of interest of the land owner where the site location would be, this project did not move forward.
Well Inventory: The District did develop a well inventory in the anticipated implementation schedule previously set.	The District created a well inventory for all of the AG, Utility, and Amenity wells located in the District. On a yearly basis only the AG wells were flow tested and monitored by the District. This well inventory helps the District maintain a more accurate flow rate of the water used for farming and helps in the accurate report of the water use. The AG water use accounts for 75% of the current water allocation in the District.
Water Inventory: The District developed a water inventory to more accurately account for water allocated to parcels within the District Boundaries.	The District created a detailed water inventory for all of the water users located in the District. The District has a detailed list of all parcels provided by Mohave County and the District updates the water inventory parcel list as parcels combine or split each month. On a yearly basis the District compares the inventory to the new yearly list provided by the Mohave County Assessor's office.

Step 5 – Fundamental Water Conservation Measures

A. Water Measurement and Accounting System Design to Measure and Account for the Water Conveyed through the District Distribution System to Water Users

Describe the District’s Current Measurement and Accounting System– The District itself does not own, operate, or maintain any wells. All wells within the District’s boundaries are owned and operated by non-District entities. These entities provide their own personnel to operate and maintain their facilities.

The District itself does not own, operate, or maintain any distribution facilities. All distribution facilities within the District’s boundaries are owned and operated by non-District entities. These entities provide their own personnel to operate and maintain their facilities. These owners have developed their own maintenance schedules to ensure that their facilities are operating appropriately. Distribution facilities within the district include pipes, valves, and accessory facilities owned and operated by utility companies located within the District. They also include ditches, gates, and accessory facilities owned and operated by agricultural entities within the District.

The District is responsible for the overall water measurement and accounting procedures associated with the service area. However, the 6 utility companies located within the District’s boundaries are also under the jurisdiction of the Arizona Corporation Commission. The accounting procedures of each utility company are the responsibility of the individual utility company. The utility companies’ meter and bill their customers in accordance with their own policies and procedures. The District in accordance with the Bureau of Reclamation (BOR) Master Contract monitors water usage on a monthly basis, including usage by the utility companies. This information is provided to the BOR monthly.

The water users including agricultural, amenity, industrial and utility providers submit reports specifying the amount of water pumped from their respective wells during the previous month to the District on a monthly basis. The District also calculates the amount of water used by non-metered, exempt wells within the District. All this data is then compiled into a single report that is transmitted to the BOR monthly.

The District passed Resolution 2019-01 requiring all AG entitlement users to install new water flow meters on all AG wells in the District. Each agricultural wellsite has a District approved flow meter and hour meter installed and District staff reads each meter monthly. If there are any issues with either the flow meter or hour meter, the

District will have them replaced on a as need basis. The District’s goal is to promote efficiency in irrigation, water conservation and the most accurate water reporting.

The District has been participating in system conservation since 2020 in order to contribute to conservation of water supplies in Lake Mead and other Colorado River reservoirs in the Lower Basin. Each year the District submits a LC Conservation Plan of Creation to make available a portion of its water entitlement for the LC Conservation Program. The plan includes a Technical Memorandum describing the acreages with a recent history of use proposed to be fallowed, the consumptive use quantification methodology, and the estimated volume of conserved water. The voluntary farm unit participants receive financial compensation in exchange for creating System Conservation Water. The District administers the program with monthly site inspections, ditch inspections, weed abatement inspections, and monthly water use monitoring. The District ensures the participants are foregoing irrigation water deliveries to the fallow and or seasonal crop acres participating each year. The District’s current System Conservation Implementation Agreement (SCIA) between the United states Bureau of Reclamation Mohave Valley Irrigation & Drainage District was entered into on August 16, 2023 for calendar years 2023, 2024, and 2025, SCIA No. 23-XX-30-W0770. The District is currently working on the Plan of Creation for 2025. The table below shows the Districts actual System Conservation in acre feet and participating acres.

Yearly District System Conservation Water Data 2020-2024
Table 2.3

Lower Colorado System Conservation					
	2020	2021	2022	2023	2024
System Conservation Water Created	6,137	6,925	9,531	12,812	*13,441
Participating Acres	1,196	1,349	2,383	2,678	**2,891

*MVIDD Plan of Creation proposed conservation not yet verified by Bureau of Reclamation.

**MVIDD Plan of Creation proposed participating acres not yet verified by Bureau of Reclamation.

B. A Water Pricing Structure That Encourages Efficiency Improvements by Water Users

Describe the District's Current Pricing Structure and How it Promotes Efficiency –

The District is responsible for the overall water measurement and accounting procedures associated with the service area. However, the 6 utility companies located within the District's boundaries are also under the jurisdiction of the Arizona Corporation Commission (ACC). The accounting procedures of each utility company are the responsibility of the individual utility company. The rates charged by the utility companies are set by the ACC. The ACC considers water conservation objectives as one of the criteria used in setting rates. Utility companies' meter and bill their customers in accordance with their own policies and procedures. Thus, the District has no control over the rates and fees charged by the utility companies.

The District does have control over the fees charged by it to users within the District. The District has taxing authority. The District taxes lands within the District at a rate of \$1.50 per acre in 2023. Each amenity user has an entitlement that specifies the rate they are charged on a per acre-foot of water basis. This price of \$100.00 per acre-foot of water per year began in 2023. The amenity users are charged for the full amount of water they order each year, not to exceed their contract amount. Additional fees are imposed at the rate of \$150.00 an acre foot for deviating over their contract. Agricultural users pay per acre-foot of water included in their entitlement and not based on fluctuations in actual use. This Allocation Administration Fee charged to agricultural customers is designed to cover costs associated with operating the District.

The District is encouraging water use efficiency from farmers by promoting Land Fallowing Programs such as the EC ICS Lower Basin Drought Contingency Plan and/or other such conservation programs approved by the District, the State of Arizona and the United States Department of the Interior per District resolution 2018-04 approved in July of 2018.

C. An Information and Education Program for Users Designed to Promote Increased Efficiency of Water Use

Describe the District's Current Information and Education Program -The District does not currently have an education program in place. However, the various utility companies are involved in education outreach to their respective customers (including schools) as well as provide information on their websites. The District is currently working with local realtors, Mohave County, and the general public to understand the importance of checking with the District to verify if an allocation has been approved for their parcel of land. This has helped with community awareness of the need to have a legal right to divert and use water within the District.

The agricultural customers are professionals in their field and have been improving their conservation efforts. These efforts include lining ditches, placing metering devices on their wells, and laser-leveling fields. These users keep in contact with National Resources Conservation Service (NRCS) as well as others for their needs.

D. Water Conservation Coordinator

The General Manager for MVIDD will serve as the Water Conservation Coordinator.

Name: Kerri Hatz
Title: General Manager
Phone: (928) 768-3325
Fax: (928) 768-5239
Email: office@mvidd.net

Step 6 – Additional Water Conservation Measures

A. Agricultural Water Conservation Measures

1 – On-Farm Program Incentives – The District has been participating in a voluntary financially compensated fallow program with several farm units since 2020. The District administers the conservation program between the farm units and Reclamation. The District ensures that all participants are following the terms set forth for the participation in the program.

2 – Water Transfers – The District has a Water Transfer Policy in place, which allows for the transfer of water from one user to another within the District. This transfer could be used in the case of a new owner acquiring a parcel of land with an existing water entitlement. It could also allow for a user that desires to transfer all or a portion of the water entitlement to another landowner within the District. In July of 2018, the District passed Resolution 2018-04 to make water available outside District boundaries for a defined program period through a rotational land fallowing program approved by the District, the State of Arizona and the United States Department of the Interior. In February of 2023, the District passed Resolution 2023-01 to make water available to non-agricultural uses within the District. This allows transfers of Agricultural Water Entitlements to transfer to Urban uses. See Appendix D for Resolution Number 07-05, 2018-04, and 2023-01.

The District has been participating in system conservation since 2020 in order to contribute to conservation of water supplies in Lake Mead and other Colorado River reservoirs in the Lower Basin. Each year the District submits a LC Conservation Plan of Creation to make available a portion of its water entitlement for the LC Conservation Program. The plan includes a Technical Memorandum describing the acreages with a recent history of use proposed to be fallowed, the consumptive use quantification methodology, and the estimated volume of conserved water. The voluntary farm unit participants receive financial compensation in exchange for creating System Conservation Water. The District administers the program with monthly site inspections, ditch inspections, weed abatement inspections, and monthly water use monitoring. The District ensures the participants are foregoing irrigation water deliveries to the fallow and or seasonal crop acres participating each year.

4 – Conjunctive Use - There are no ground water basins, ground water recharge areas, or conjunctive use programs currently in place within the District's boundaries. All water within the District is considered Colorado River water with the exception of a limited amount of reclaimed water.

5 – Land Management – There are some parcels of land lying within the District whose soil and topography make them unsuitable for farming. These parcels have been excluded from receiving an agricultural entitlement from the District.

6 – Operational Practices and Procedures – The District does not own, operate, or maintain any production (wells), storage, distribution, drainage, or recharge facilities. All the aforementioned facilities located within the District are owned, operated, and maintained by non-district entities. These owners have developed their own maintenance schedules to ensure that their facilities are operating appropriately. The District does inspect meter installations and irrigation ditches to confirm compliance with District Policies. The District passed Resolution 2019-01 to require all AG wells to install Water Flow Meters and the District replaces them at no cost to the AG users when they need replacement.

7 – Distribution System Scheduling - The District itself does not own, operate, or maintain any distribution facilities. All distribution facilities within the District’s boundaries are owned, operated, and maintained by non-District entities. These entities provide their own personnel to operate and maintain their facilities. Distribution facilities within the district include pipes, valves, and accessory facilities owned and operated by utility companies located within the District. They also include ditches, gates, and accessory facilities owned and operated by agricultural entities within the District. The owners of the facilities schedule their own operation of their facilities. The District does not do any distribution system scheduling.

8 – On-farm Irrigation Scheduling - The District does not own, operate, or maintain any wells itself. All wells within the District’s boundaries are owned, operated, and maintained by non-District entities. These entities provide their own personnel to operate and maintain their facilities. The owners of the facilities schedule their own operation of their facilities. Thus, the District does not do any irrigation scheduling.

9 – Pump Efficiency Evaluations – The District itself does not own, operate, or maintain any wells. All wells within the District’s boundaries are owned, operated, and maintained by non-District entities. These entities provide their own personnel to operate and maintain their facilities. The District does not currently have a program to evaluate private wells within the District to determine their energy and water efficiency.

10 – Distribution Control – The District itself does not own, operate, or maintain any distribution facilities. All distribution facilities within the District’s boundaries are owned, operated, and maintained by non-District entities. These entities provide their own personnel to operate and maintain their facilities. Distribution facilities within the district include pipes, valves,

and accessory facilities owned and operated by utility companies located within the District. They also include ditches, gates, and accessory facilities owned and operated by agricultural entities within the District. The District does not have the ability to modify any of the distribution facilities owned by others.

11 – Re-use Systems – The District itself does not own, operate, or maintain any re-use facilities. All re-use facilities within the District’s boundaries are owned and operated by non-District entities. These entities provide their own personnel to operate and maintain their facilities. Re-use facilities within the district include pipes, valves, and accessory facilities owned and operated by utility companies located within the District. There is currently only one (1) re-use user within the District.

12 – Reduction of Conveyance Losses – The District does not own, operate, or maintain any conveyance facilities, but recognizes the need to reduce losses through these facilities. The District passed Board Resolution 2008-09 on November 5, 2008. This resolution required the lining of all irrigation ditches within the District. It reads in part, “All irrigation ditches located within the boundaries of the District must be lined and maintained to the minimum standards established by the District at the expense of the Water User.” All the current agricultural ditches are lined.

13 – Construction, Lining or Covering of Regulatory Reservoirs – The District itself does not own, operate, or maintain any storage facilities. There are no regulating reservoirs within the District. All storage facilities within the District’s boundaries are owned and operated by non-District entities. These entities provide their own personnel to operate and maintain their facilities.

14 – Laser Land Leveling – All the agricultural land within the District has been laser-leveled. Much of the land is leveled annually.

Step 7 – Selected Measures and Projected Results

1 – Continue to develop a crop efficiency program. Farmers in the area have been evaluating and experimenting with different crops with lower water use, such as seasonal wheat, sudan, etc. The District will work with the farmers to better understand the consumptive use savings associated with growing these crops instead of the crops typically grown in the District. This program is part of the District’s conservation program with Reclamation.

2 – The District is always trying to develop a more accurate water metering program to account for water used within the District. The District passed Resolution 2019-01 requiring all AG wells to install Water Flow Meters. The District monitors both the flow meters and hours meters monthly and replaced them as needed at no cost to the farm unit.

3 – Continue to update the Agricultural well inventory as needed. This allows the District to track and accurately account for the water used for AG water use within the District.

4 – Continue to assess the water needs for the District. The District allocates permanent water entitlements for residential and commercial property and currently there are approximately 4,586 vacant lots within the District that have permanent water entitlements. The homes that may ultimately be built on these lots will provide housing for approximately 10,500 more people in the District. The District is accommodating long-term growth beyond these already dedicated supplies through allowing transfers of water from Agricultural Subcontract Entitlement Holders to Urban uses.

5 - The District continues to work with local realtors, Mohave County, and the general public to understand the importance of checking with the District to verify if an allocation has been approved for their parcel of land. This has helped with community awareness of the need to have a legal right to divert and use water within the District. This helps to eliminate the water being used and not accounted for by the District increasing the accuracy of our water reporting.

6 – Monthly updates to the District’s water inventory based on all the parcels accounted for by Mohave County Assessor’s office that are located within the District’s accounting area.

Step 8 – Environmental Review

The District does not own, operate, or maintain any wells, distribution, or storage facilities. The users own and operate their own facilities. The District has no water uses for canal seepage, evaporation, spills, or riparian uses in canals since the District does not own or operate any of these facilities. There are agricultural and M & I water uses within the District. There are a number of developments and commercial projects within the District's boundaries. The facilities owned and operated by the users have not created any new habitat or created any environmental compliance issues that the District is aware of.

The water quality reports from the various utility companies along with the study conducted by ADEQ indicate that water quality issues are primarily point source pollution caused by seepage from septic systems and naturally occurring arsenic.



Step 9 – Implementation Schedule and Budget for Each Selected Measure

1 – The District has been participating in system conservation since 2020 in order to contribute to conservation of water supplies in Lake Mead and other Colorado River reservoirs in the Lower Basin. Each year the District submits a LC Conservation Plan of Creation to make available a portion of its water entitlement for the LC Conservation Program. The plan includes a Technical Memorandum describing the acreages with a recent history of use proposed to be fallowed, the consumptive use quantification methodology, and the estimated volume of conserved water. The voluntary farm unit participants receive financial compensation in exchange for creating System Conservation Water. The District administers the program with monthly site inspections, ditch inspections, weed abatement inspections, and monthly water use monitoring. The District ensures the participants are foregoing irrigation water deliveries to the fallow and or seasonal crop acres participating each year. The participants pay a \$5.00 per acre foot of conserved water to the District each year for the administrative cost for overseeing the conservation program.

2 – Continue to monitor the water-metering devices and hour meters. The District passed Resolution 2019-01 requiring that all AG wells install Water Flow Meters. The District monitors these flow meters and hour meters on a monthly basis and replaces that at no cost to the farm unit. This program is on a replacement as needed and budgeted as field maintenance yearly. The total budgeted cost of the program is estimated at \$30,000 for the fiscal year 2024/2025.

3 – Continue to update the Agricultural well inventory as needed. This allows the District to track and accurately account for the water used for AG water use within the District. This project is being updated as needed. The budgeted cost of this program should be minimal.

4 – Continue to assess the water needs for the District. The District allocates permanent water entitlements for residential and commercial property and currently there are approximately 4,586 vacant lots within the District that have permanent water entitlements. The homes that may ultimately be built on these lots will provide housing for approximately 10,500 more people in the District. The District is accommodating long-term growth beyond these already dedicated supplies through allowing transfers of water from Agricultural Subcontract Entitlement Holders to Urban uses. The budgeted cost of this program cannot be estimated at this time.

5 – Continue to work with local realtors, Mohave County, and the general public to understand the importance of checking with the District to verify if an allocation has been approved for their parcel of land. This has helped with community

awareness of the need to have a legal right to divert and use water within the District. This helps to eliminate the water being used and not accounted for by the District increasing the accuracy of our water reporting. The budgeted cost of this should be minimal.

6 – Continue monthly updates to the District’s water inventory based on all the parcels accounted for by Mohave County Assessor’s office that are located within the District’s accounting area. The budgeted cost of this program should be minimal.

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References

Bureau of Reclamation (BOR)

Mohave Valley Irrigation and Drainage District (MVIDD or District), Corporate Records

Interstate Compact Defining the Boundary between the States of Arizona and California

Minutes of the Mohave County Board of Supervisors December 23, 1963

U.S. Supreme Court Reports, Bryant v. Yellen

Mohave County Board of Supervisors Resolution No. 248

Arizona Department of Water Resources

Mohave County Assessor's Office

United States Geological Survey (USGS)

USDA Natural Resource Conservation Service, Soil Maps

www.Desertmuseum.org

Arizona Game and Fish Department

Western Regional Climate Center wrc@dri.edu

www.Ag.Arizona.edu

www.USA.Com

Bella Vista Homeowners Association

Bermuda Water Company, Inc. (Utilities, Inc.)

EPCOR Water

Lagoon Estates Water Company

Fort Mojave Tribal Utility Authority

Sunrise Vistas Utilities

Bullhead City Utilities

Land IQ, LLC

Arizona Department of Environmental Quality (ADEQ)

Central Arizona Project

City of Bullhead City

https://www.cnrfc.noaa.gov/monthly_precip.php

en.climate-data.org

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Appendices –

Appendix A –	Soil Maps
Appendix B -	ADWR Exempt Well Listing
Appendix C -	Board Resolutions Water Allocations
Appendix D -	Board Resolution Water Transfer
Appendix E -	Board Resolution Weed Abatement

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