

Guests Present

Elise Nguyen	CCWQ
AJ Rodrigues	CCWRD
Erik Anderson	CCWRD
Chang Vang	SNWA
Deena Hannoun	SNWA
Chris Marinch	CLV
Dawn Boyer	CLV

1. CALL TO ORDER

The Sewage and Wastewater Advisory Committee (SWAC) meeting was called to order by Chair Dan Fischer, Clark County Water Reclamation District at 9:04 a.m. It was confirmed that the meeting was properly noticed and posted in accordance with the Open Meeting Law.

2. COMMENTS BY THE GENERAL PUBLIC - None

3. APPROVAL OF THE MINUTES OF THE MEETING OF NOVEMBER 1, 2023

Todd Tietjen moved and John Bettencourt seconded to accept the November 1, 2023 minutes. The motion was unanimously approved.

4. APPROVAL OF AGENDA

John Bettencourt moved and Brian Carlson seconded to approve the agenda. The motion was unanimously approved.

5. PRESENTATION: RECYCLED WATER FLOW CHANGES FROM THE SARS-CoV-2 PANDEMIC IN SOUTHERN NEVADA: ANALYSIS AND MODEL IMPROVEMENTS (SNWA)

6. DISCUSSION OF QUARTERLY FLOW REPORT

The group discussed the flow report for the fourth quarter of 2023:

- Wastewater flows across all municipalities are higher compared to the previous two years.
- Water production is down at LVVWD, City of Henderson and North Las Vegas compared to the previous two years. However, the municipalities of Boulder City and Big Bend show higher production compared to the past two years.

7. MEMBER UPDATES

A. Moapa Valley Water District

- Nothing to report.

B. Las Vegas Valley Water District

- Participating in on-going discussions about the new lead and copper rule revisions that will implement stricter and more rigorous sampling criteria in an effort to locate and replace legacy pipes.
- Working with SNWA to increase the potable water rates that golf courses pay.
- Continuing to promote water conservation across Southern Nevada.
- Horizon lateral efforts continue.
- Lake Mead levels increased due to the recent rains. The predicted lake level at the end of CY 2024 is 1056 ft.
- Working in collaboration with the National Park Service to setup weather buoys on Lake Mead.
- Continuing to monitor NDEP's proposed antidegradation regulations.

- Continuing to maintain the Lower Colorado River Water Quality Database. Majority of the data is being migrated to a new platform barring some old well data from sites far down river.

C. Boulder City

- An odor control project that will install a new dry scrubber on lift station #1 is scheduled to begin soon.
- A project to install a new headworks screen is expected to go out for bid soon.

D. Virgin Valley Water District

- N/A

E. City of Mesquite

- N/A

F. City of Las Vegas

- O&M Updates:
 - Dewatering building rehabilitation project is at about 75% design.
 - Starting the headworks rehabilitation. Project is at about 10% design.
 - Lab rehabilitation project design contract has been negotiated and will be going before the city council soon.
 - Site security project is 100% designed but is going to be broken up into multiple phases to fit within the budget.
- CIP Updates:
 - Filtration building rehabilitation project is on-going. A substantial amount of work has been completed since the building was taken offline in November, including replacing all influent pumps and motors and installing new electrical infrastructure. The building is expected to be back online soon.
 - Collected additional phosphorus samples on the Lake. All samples are within an acceptable range.
 - Continuing to develop a Facility Plan which will cover topics such as maintenance, staffing, and managing increasing construction costs.
 - Phase I of the process air blower replacement project is underway.
- The laboratory is currently recruiting a senior chemist position. Recruitment will begin soon for a chemist and laboratory technician.

G. Clark County Water Reclamation District

- Collection System Updates:
 - Whitney and Lincoln lift stations rehabilitation projects are on-going.
- The Flamingo Plant Updates:
 - Plant expansion is on-going:
 - New headworks, primaries, and secondaries are being constructed. These additions will increase the capacity of the plant.
 - Construction of the sludge thickeners is on-going.
 - Electrical costs to run the plant are higher than anticipated.
 - Citizens Advisory Committee met to discuss the increasing costs of on-going capital improvement projects and the overall financial position of the Water Reclamation District. They decided to borrow additional funds and approved a rate increase to address the rising construction costs.

H. City of North Las Vegas

- Rented six diesel pumps to control the influent into two bioreactors. The pumps will bypass half of the influent channel to test the PID controls to one of the bioreactors.
- The membrane expansion and replacement project is approximately 50% complete.
- Construction of the flow equalization basin is nearly complete.
- Continuing the SCADA integration with the expectation to be online next month.
- Construction of the permanent septage receiving station is on-going.
- Climber screen maintenance is on-going.
- Sloan Channel project has been delayed by the Carey Ave project.

I. City of Henderson

- Phase 4 expansion project has been approved by the City Council. Construction is set to begin in about a month, with an expected completion date of December 2025.
- The UV project, that added a third channel, is in the midst of a twelve-day performance test. Once the test is finished, the project will be complete.
- Construction of Cadence Lift Station is on-going.
- Phase II of the membrane upgrade project will begin once the new membranes are delivered next week.
- To stay in compliance with the EPA's new lead and copper rule revision, Henderson is putting in a concerted effort into locating any legacy lead pipes that may exist in the system.
- Construction costs are continuing to increase and impact capital improvement projects.

J. Clark County

- NDEP issued the new MS4 permit, which encompasses all Las Vegas Valley jurisdictions. Stormwater Management Plan development is underway and will become an enforceable component of the permit.
- 2023 CBER population forecast meetings will begin soon.
-
- 208 Plan assessment is underway. Updating the plan is expected to begin in the next fiscal year.

8. MEMBER VACANCIES

- A. Virgin Valley Water District – 1 member vacancy
- B. City of Las Vegas – 2 member vacancies

9. COMMENTS BY THE GENERAL PUBLIC - None

10. SCHEDULE NEXT MEETING

The next meeting is scheduled for May 1, 2024 at 9:00 am. A meeting invite will be sent out.

11. ADJOURNMENT

The meeting was adjourned at 10:32 am.

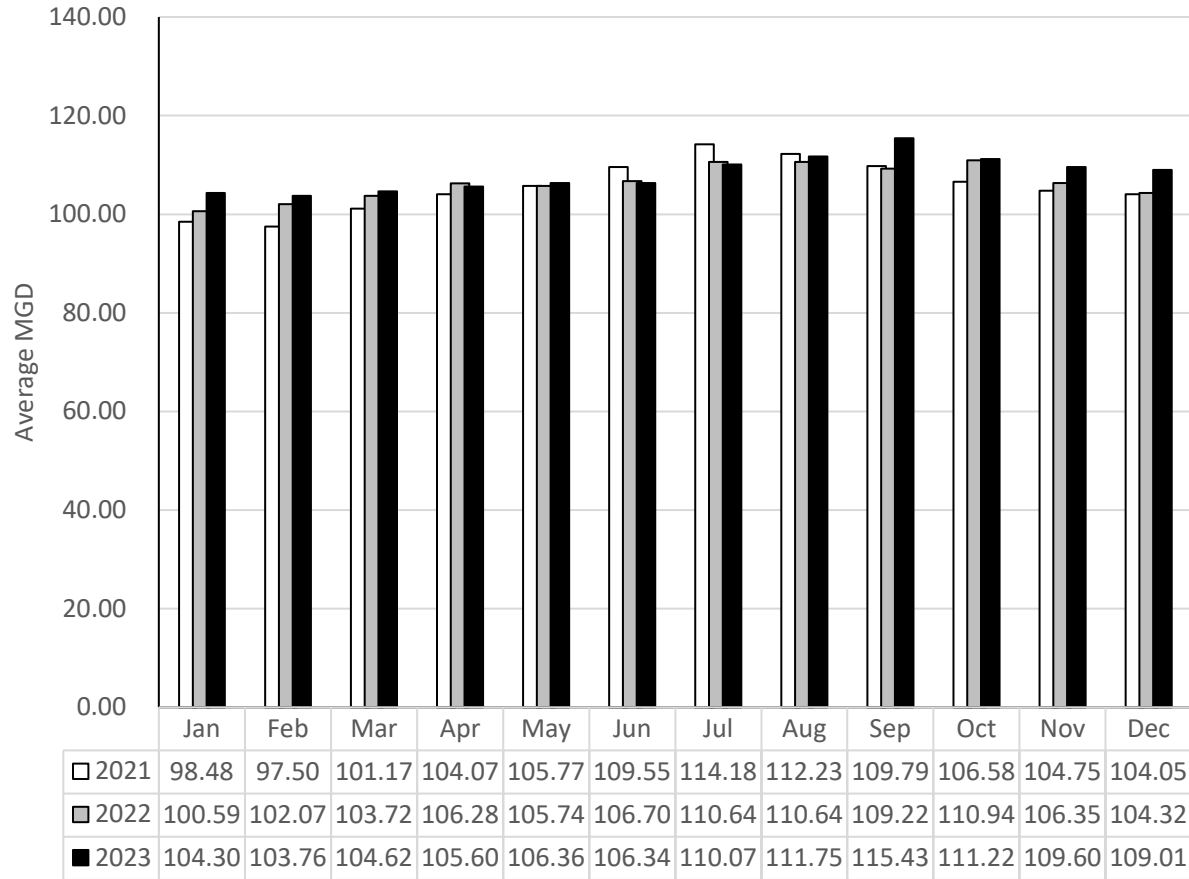
2023
4th Quarter Flow Report For
Clark County Sewage And
Wastewater Advisory
Committee
(SWAC)

January 30, 2024

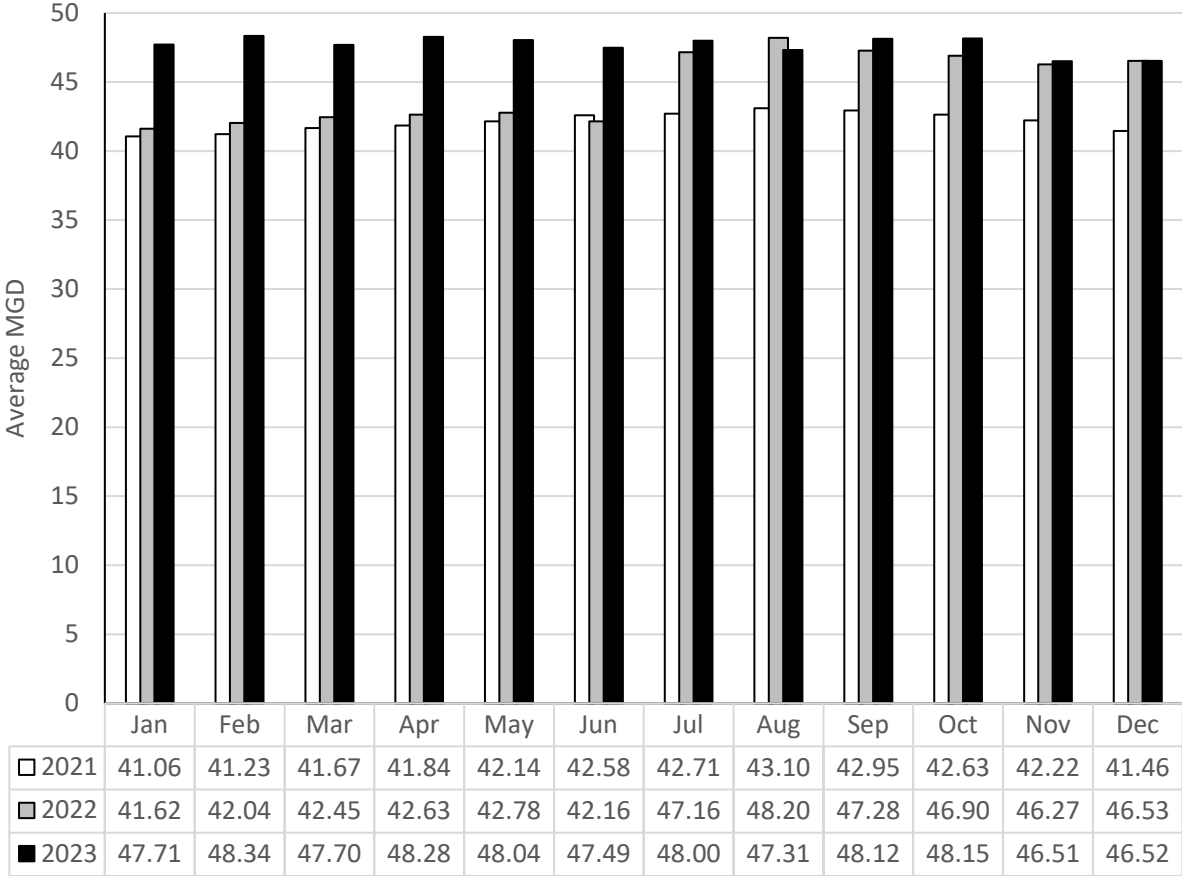
Wastewater Flows

2021 through 2023

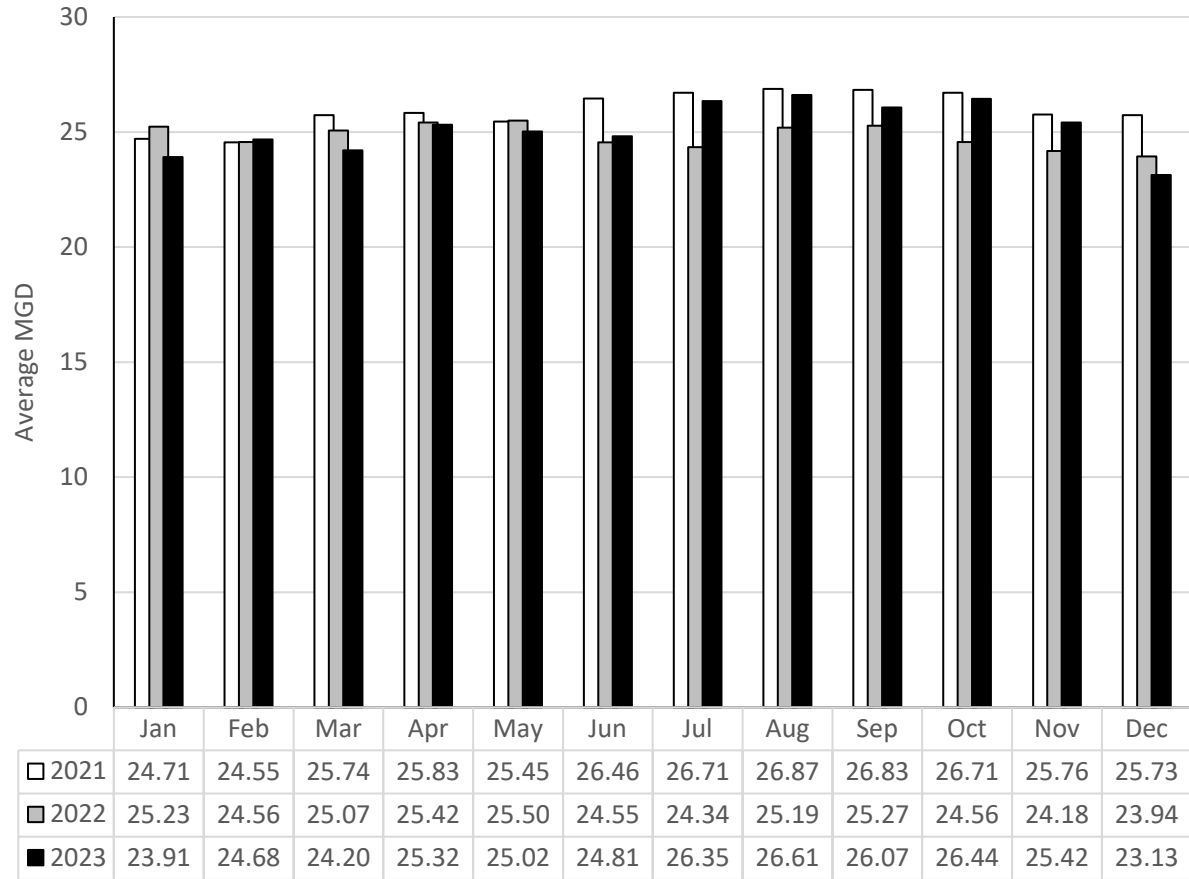
Clark County Water Reclamation District Wastewater Flows



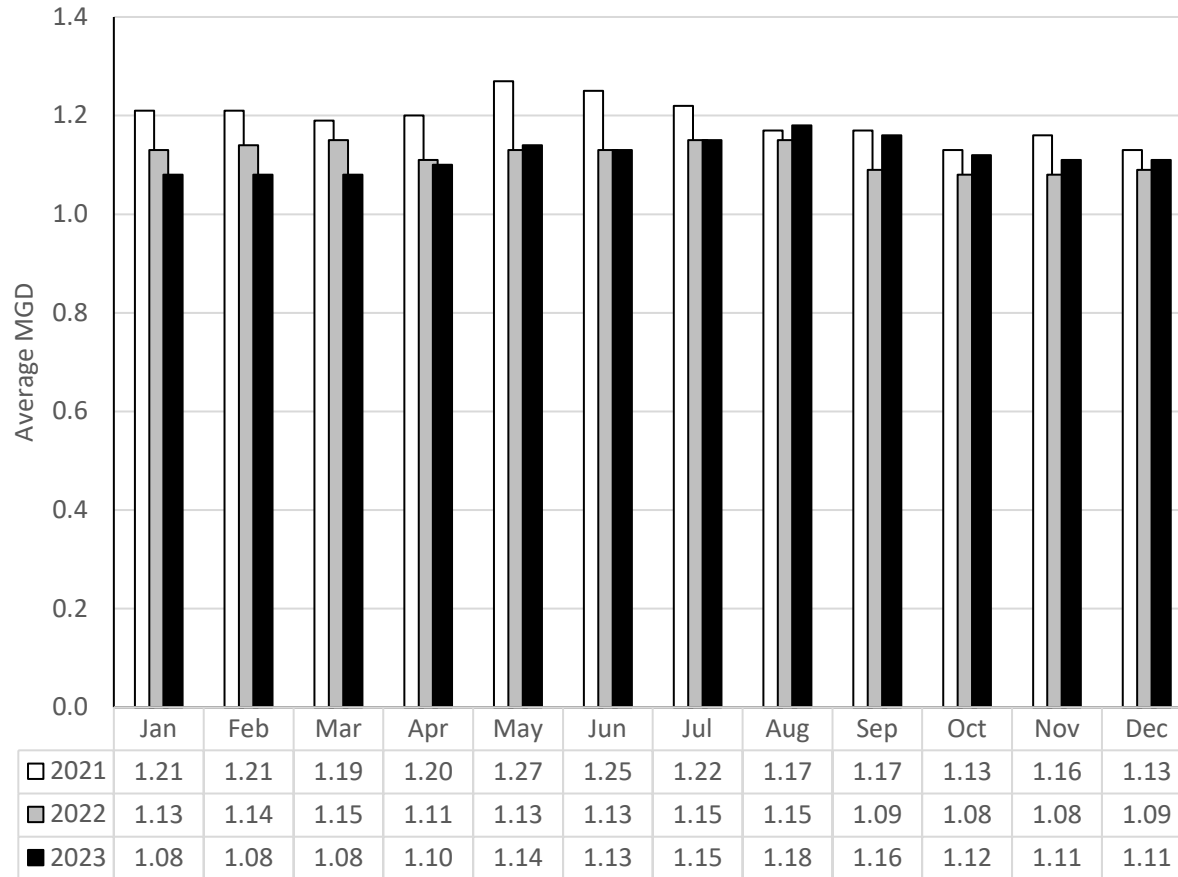
City of Las Vegas Wastewater Flows



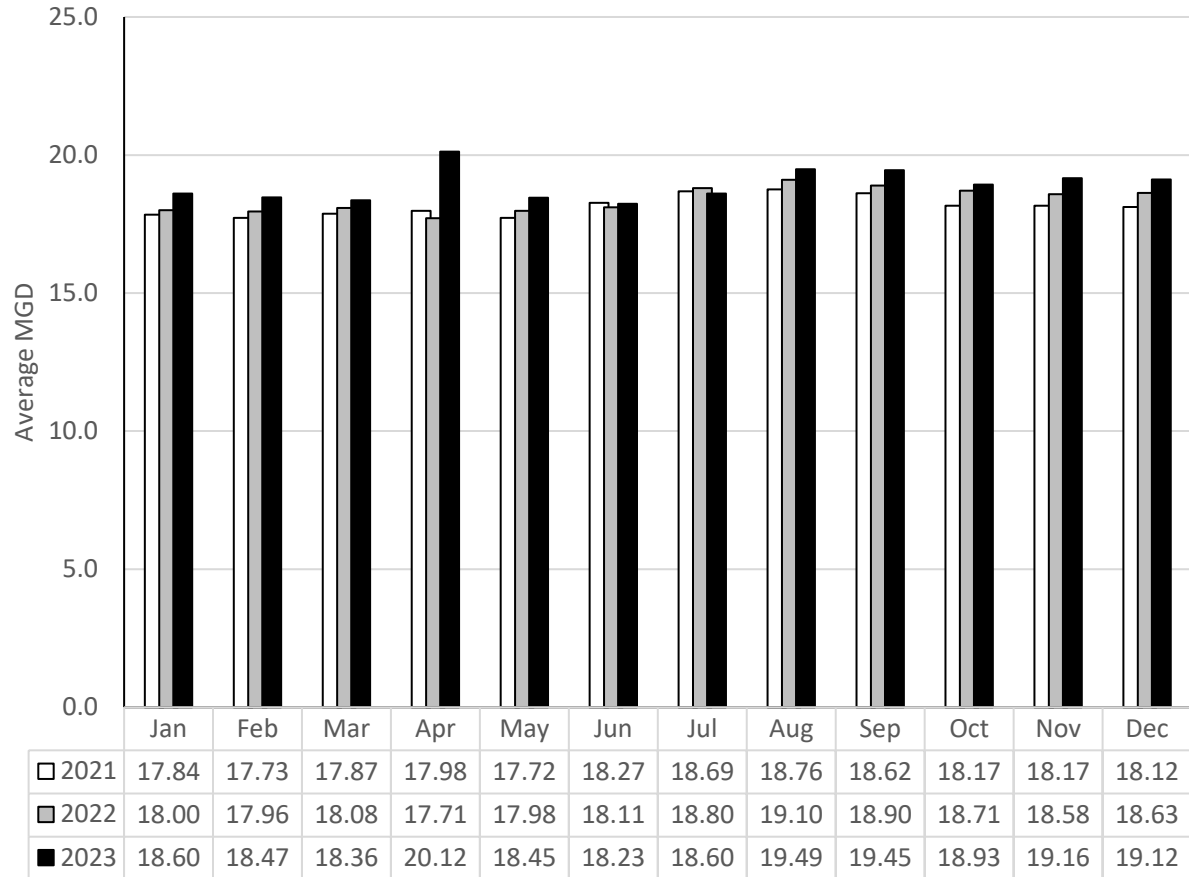
City of Henderson Wastewater Flows



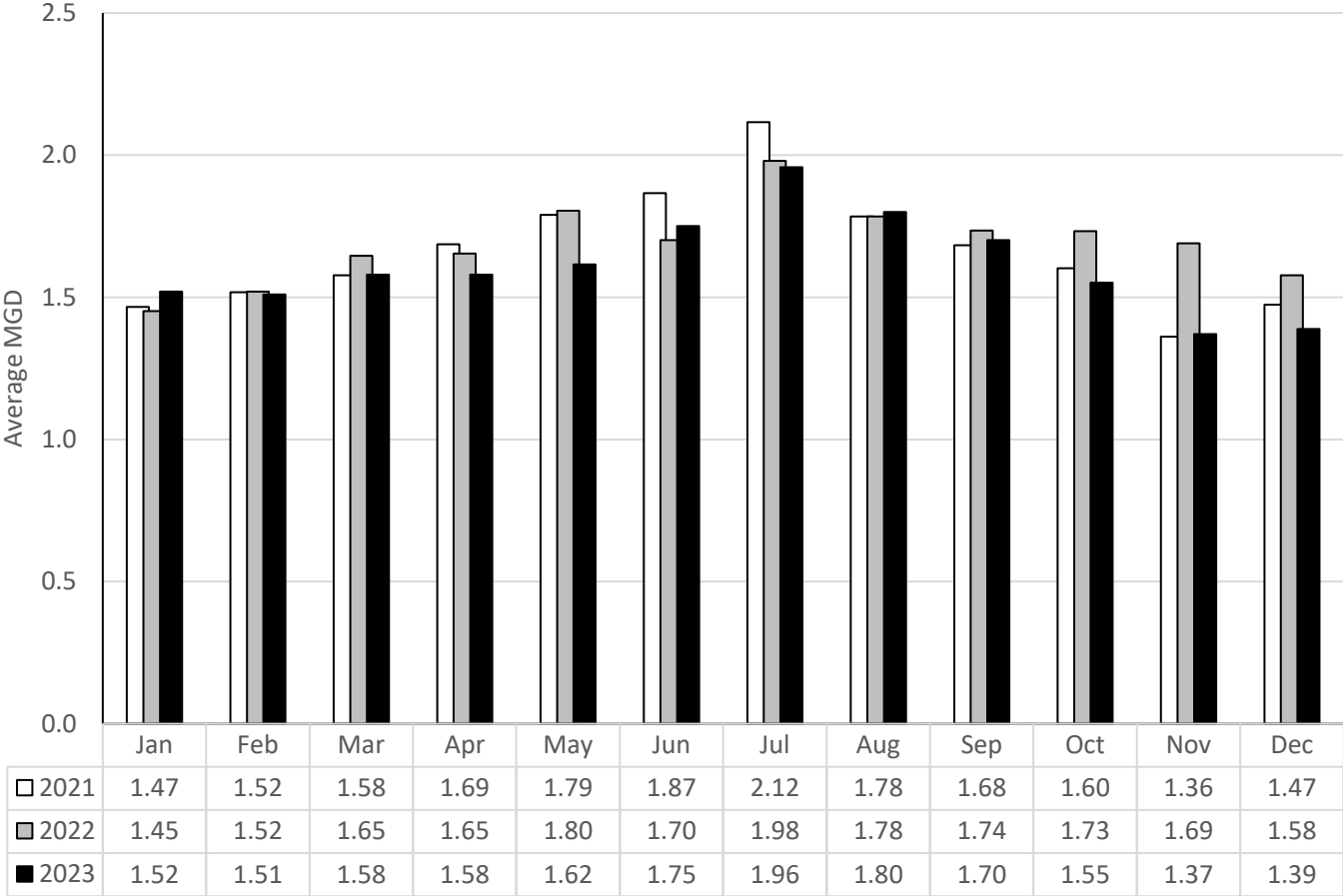
Boulder City Wastewater Flows



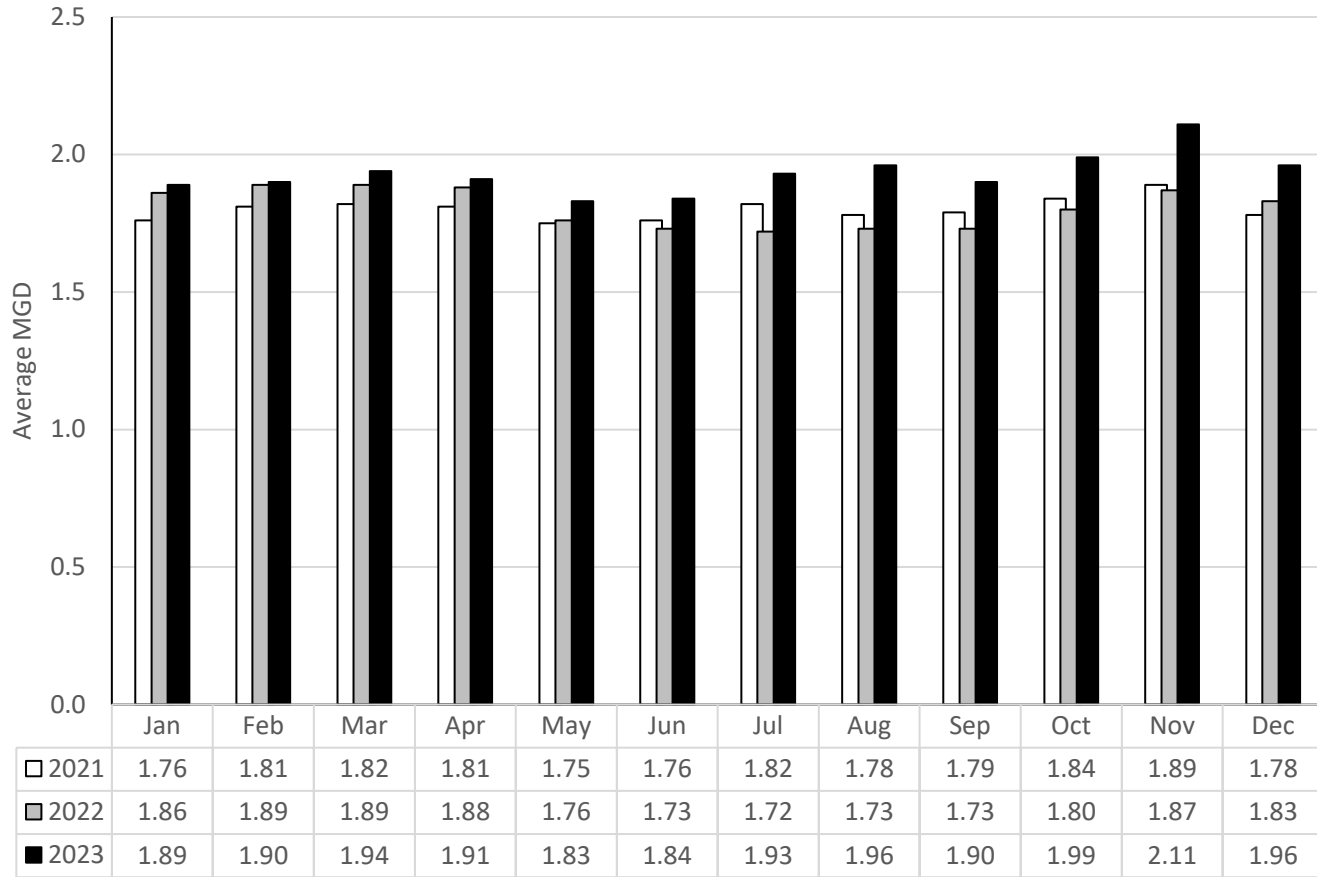
City of North Las Vegas Wastewater Flows



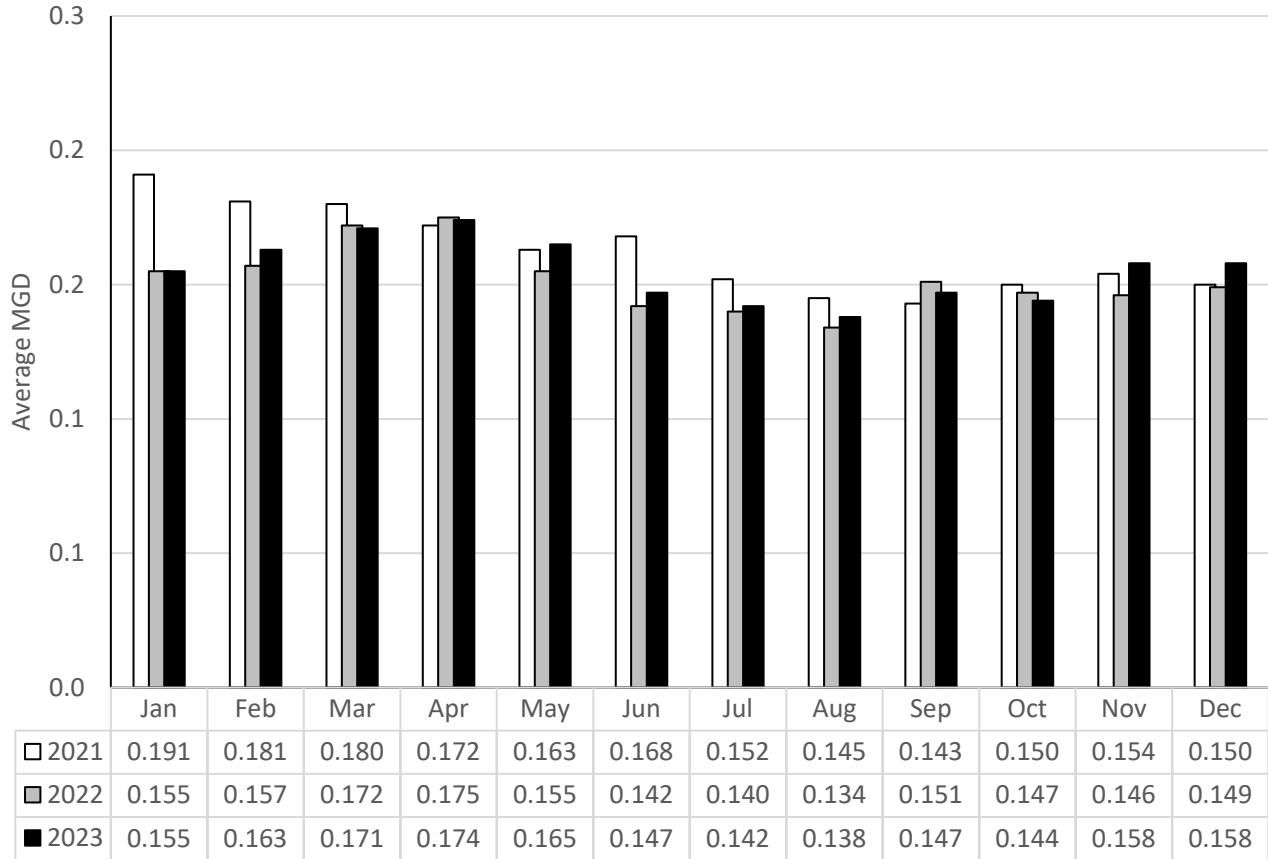
Laughlin Wastewater Flows



City of Mesquite Wastewater Flows

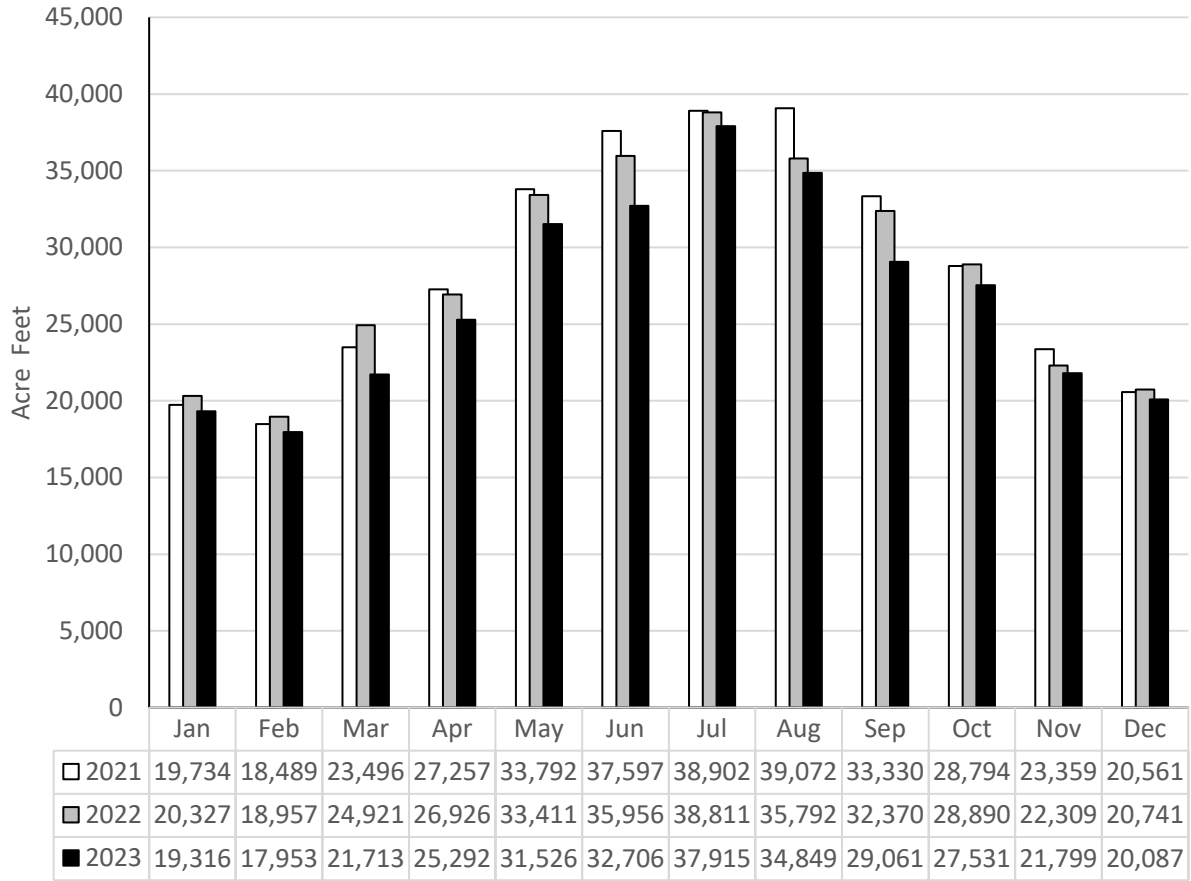


Moapa Wastewater Flows

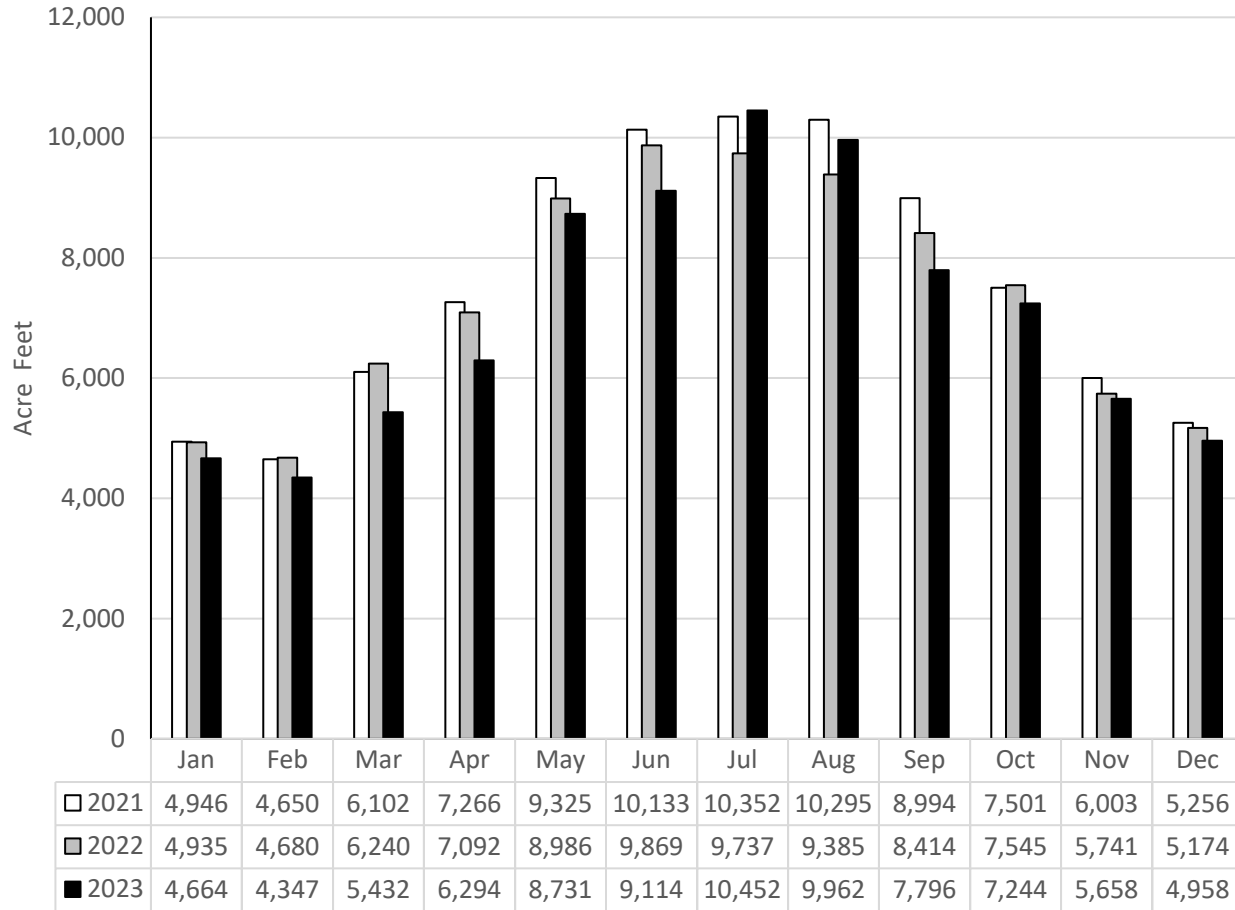


Water Production 2021 through 2023

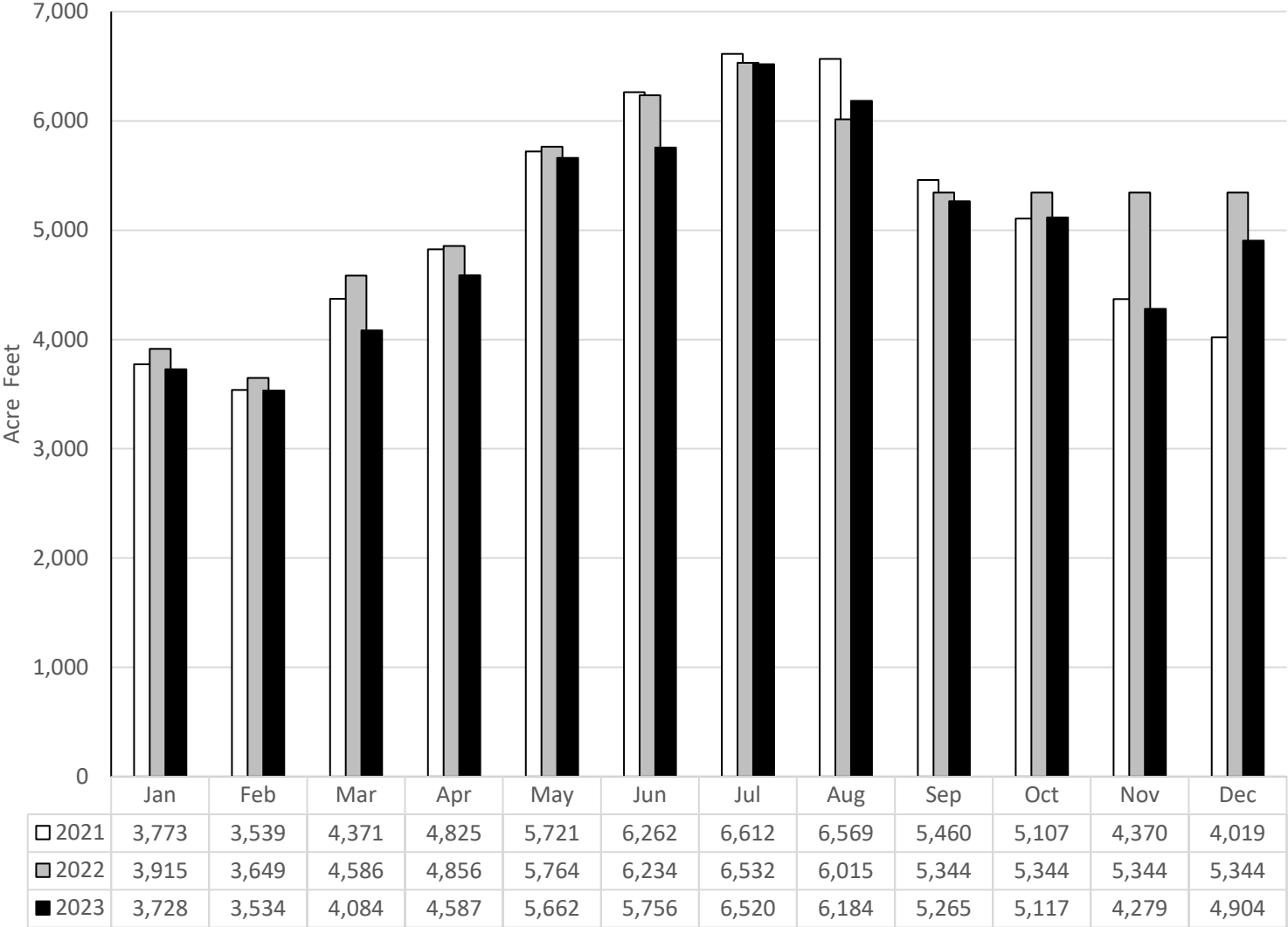
Las Vegas Valley Water District Water Production



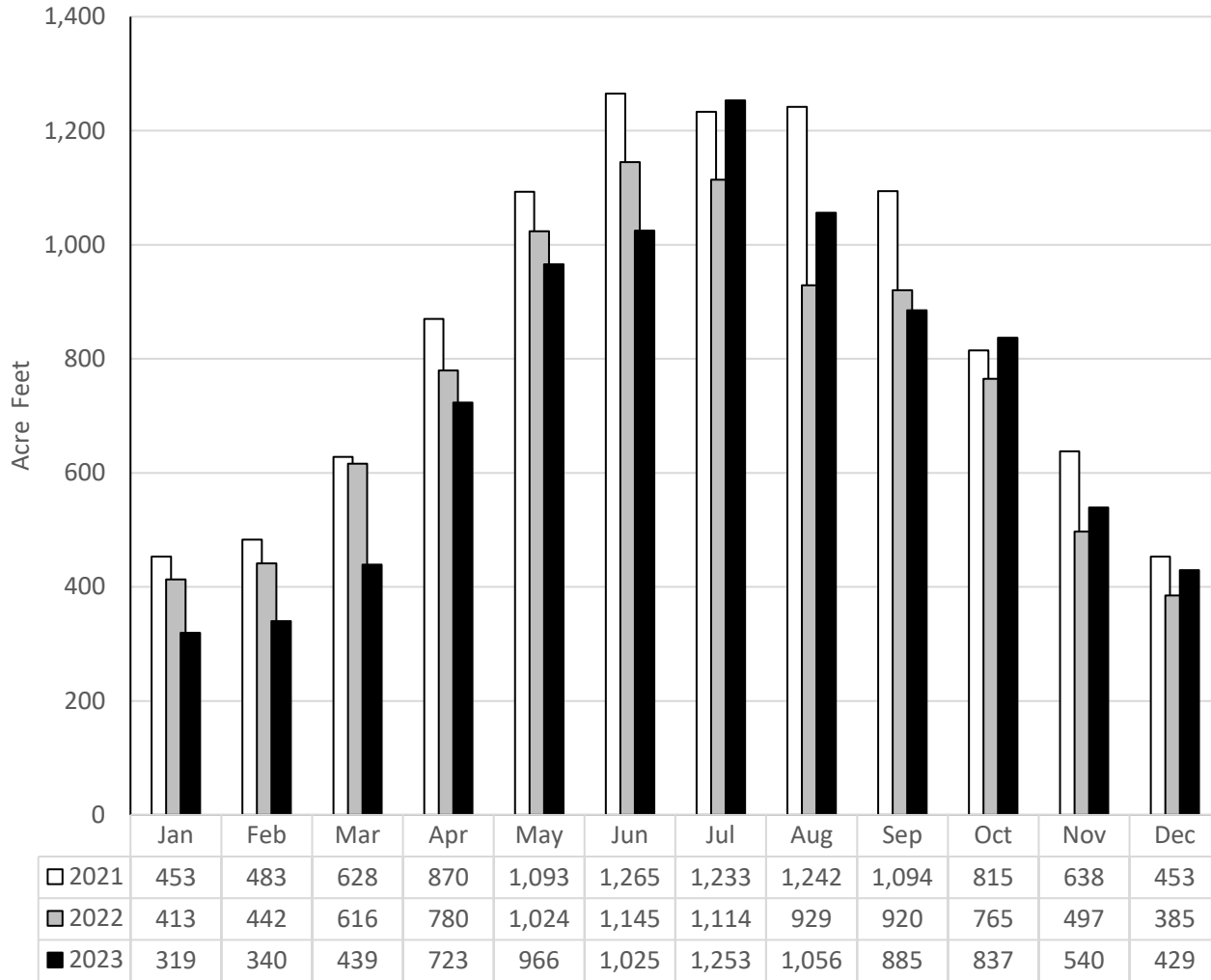
City of Henderson Water Production



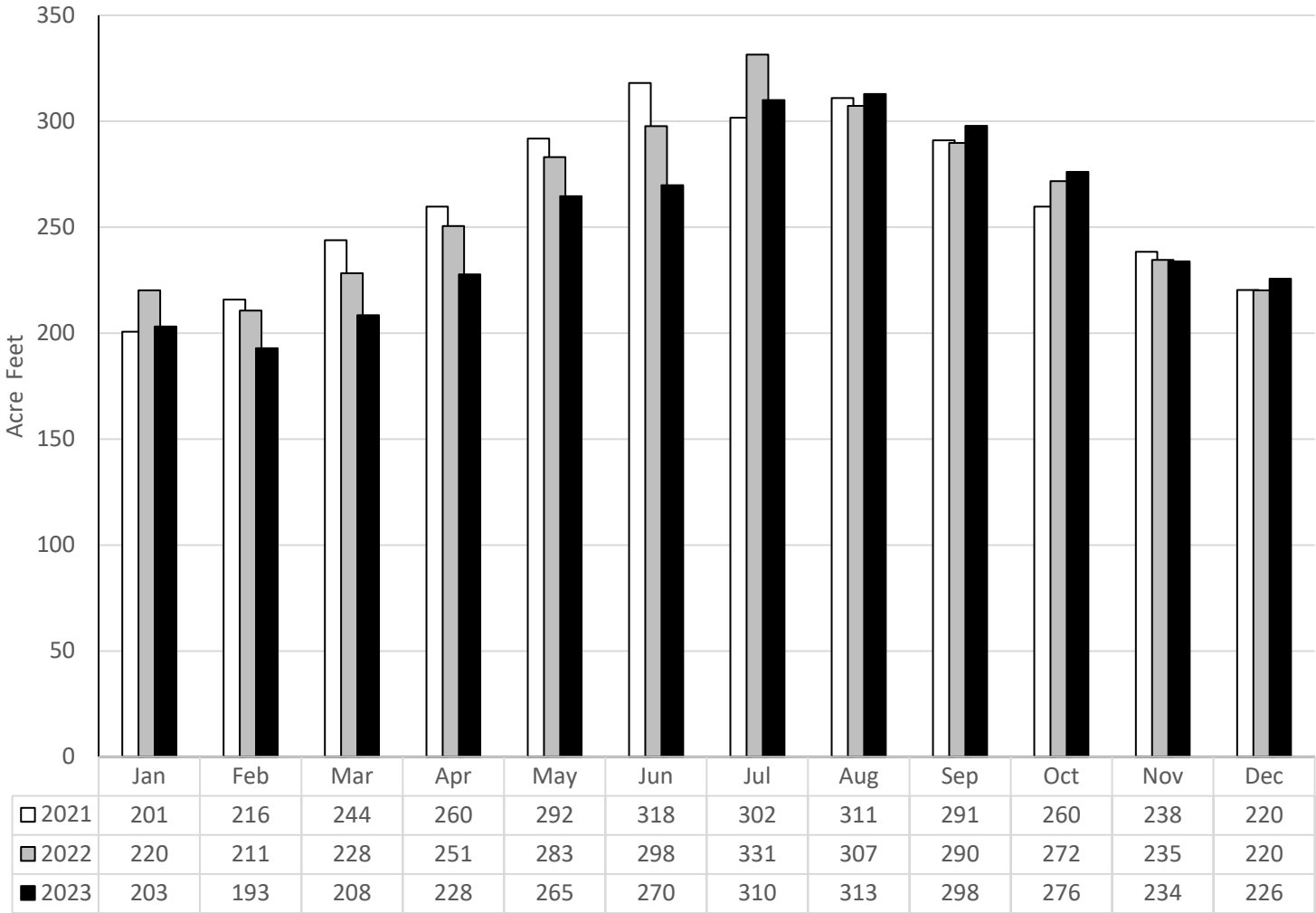
City of North Las Vegas Water Production



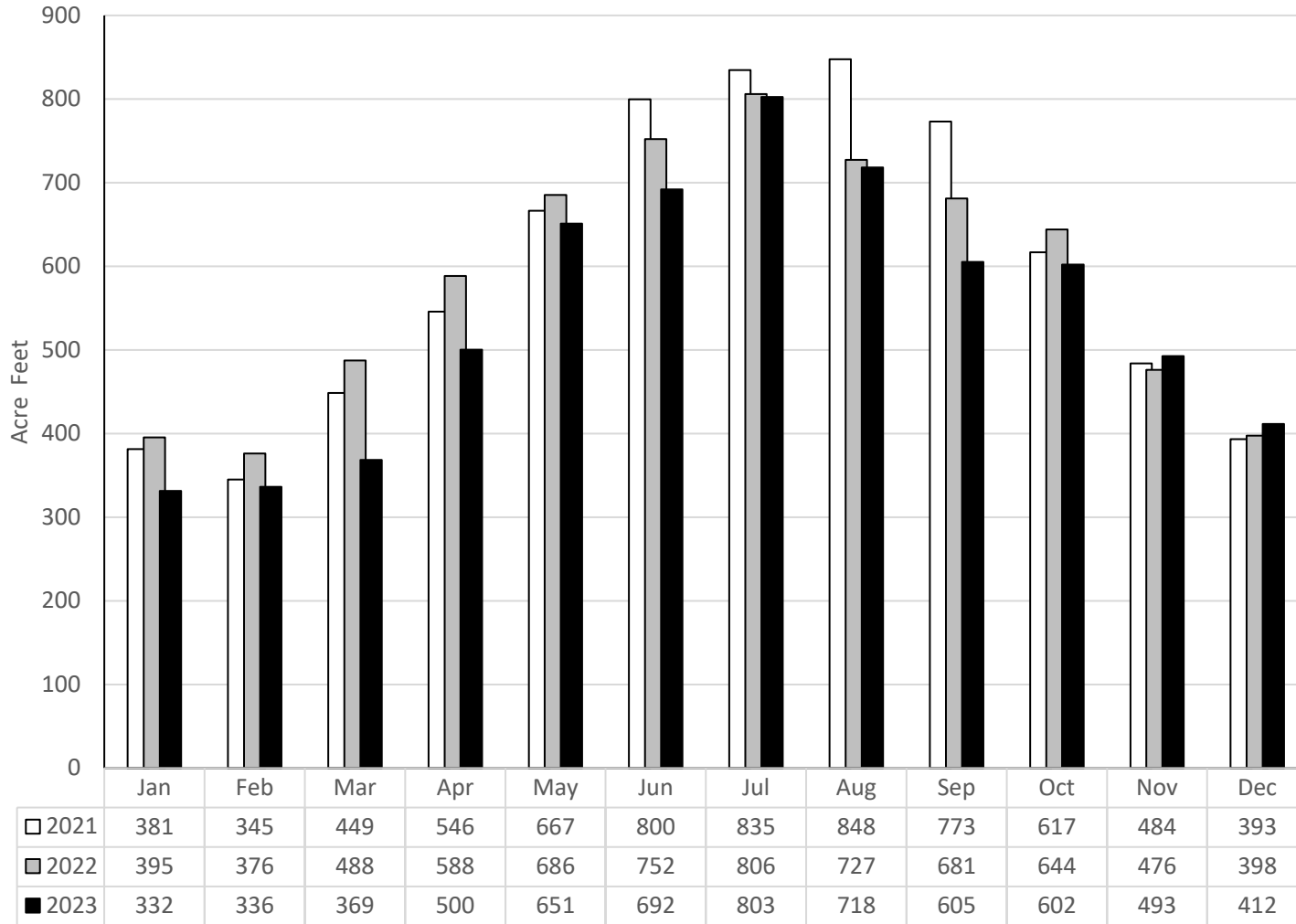
Boulder City Water Production



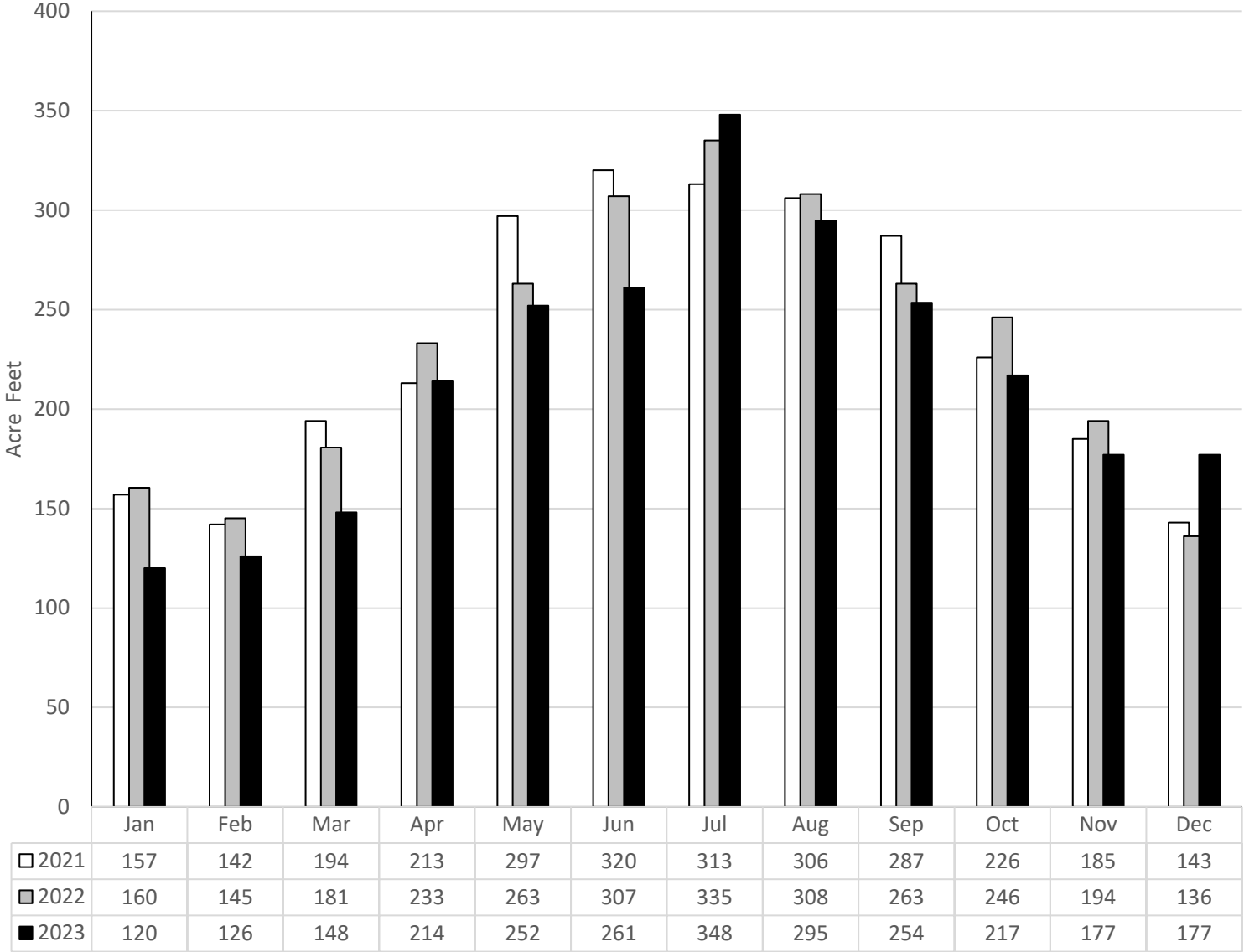
Big Bend Water District Water Production



Virgin Valley Water District Water Production



Moapa Valley Water District Water Production



Historic Trends Influent Wastewater Flows

(Avg. in MGD)

Month	Clark County Water Reclamation District *			City of Las Vegas			City of North Las Vegas			City of Henderson			Boulder City		
	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
Jan	98.48	100.59	104.30	41.06	41.62	47.71	17.84	18.00	19.83	24.71	25.23	23.91	1.21	1.13	1.08
Feb	97.50	102.07	103.76	41.23	42.04	48.34	17.73	17.96	19.70	24.55	24.56	24.68	1.21	1.14	1.08
Mar	101.17	103.72	104.62	41.67	42.45	47.70	17.87	18.08	19.71	25.74	25.07	24.20	1.19	1.15	1.08
Apr	104.07	106.28	105.60	41.84	42.63	48.28	17.98	17.71	20.12	25.83	25.42	25.32	1.20	1.11	1.10
May	105.77	105.74	106.36	42.14	42.78	48.04	17.72	17.98	20.40	25.45	25.50	25.02	1.27	1.13	1.14
Jun	109.55	106.70	106.34	42.58	42.16	47.49	18.27	18.11	20.30	26.46	24.55	24.81	1.25	1.13	1.13
Jul	114.18	110.64	110.07	42.71	47.16	48.00	18.69	18.80	20.80	26.71	24.34	26.35	1.22	1.15	1.15
Aug	112.23	110.64	111.75	43.10	48.20	47.31	18.76	19.10	21.37	26.87	25.19	26.61	1.17	1.15	1.18
Sep	109.79	109.22	115.43	42.95	47.28	48.12	18.62	18.90	21.10	26.83	25.27	26.07	1.17	1.09	1.16
Oct	106.58	110.94	111.22	42.63	46.90	48.15	18.17	18.71	20.62	26.71	24.56	26.44	1.13	1.08	1.12
Nov	104.75	106.35	109.60	42.22	46.27	46.51	18.17	18.58	20.45	25.76	24.18	25.42	1.16	1.08	1.11
Dec	104.05	104.32	109.01	41.46	46.53	46.52	18.12	18.63	20.32	25.73	23.94	23.13	1.13	1.09	1.11
ANNUAL	105.68	106.43	108.17	42.13	44.92	47.68	18.16	18.38	20.39	25.95	24.82	25.16	1.19	1.12	1.12

* Includes estimated .5 MGD NLV

Historic Trends Influent Wastewater Flows

Month	Searchlight			Blue Diamond			MVWRC			Laughlin			Mesquite			Indian Springs		
	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
Jan	0.030	0.041	0.039	0.017	0.017	0.019	0.191	0.155	0.155	1.47	1.45	1.52	1.76	1.86	1.89	0.072	0.088	0.106
Feb	0.029	0.042	0.040	0.020	0.026	0.009	0.181	0.157	0.163	1.52	1.52	1.51	1.81	1.89	1.90	0.073	0.091	0.098
Mar	0.034	0.039	0.042	0.020	0.017	0.016	0.180	0.172	0.171	1.58	1.65	1.58	1.82	1.89	1.94	0.074	0.095	0.138
Apr	0.027	0.043	0.040	0.016	0.015	0.016	0.172	0.175	0.174	1.69	1.65	1.58	1.81	1.88	1.91	0.082	0.095	0.139
May	0.340	0.044	0.041	0.016	0.010	0.016	0.163	0.155	0.165	1.79	1.80	1.62	1.75	1.76	1.83	0.082	0.098	0.145
Jun	0.028	0.042	0.042	0.014	0.009	0.015	0.168	0.142	0.147	1.87	1.70	1.75	1.76	1.73	1.84	0.081	0.101	0.150
Jul	0.042	0.048	0.042	0.018	0.011	0.011	0.152	0.140	0.142	2.12	1.98	1.96	1.82	1.72	1.93	0.092	0.101	0.157
Aug	0.041	0.045	0.042	0.015	0.012	0.013	0.145	0.134	0.138	1.78	1.78	1.80	1.78	1.73	1.96	0.098	0.104	0.191
Sep	0.030	0.042	0.041	0.018	0.011	0.015	0.143	0.151	0.147	1.68	1.74	1.70	1.79	1.73	1.90	0.104	0.101	0.156
Oct	0.033	0.039	0.041	0.017	0.012	0.014	0.150	0.147	0.144	1.60	1.73	1.55	1.84	1.80	1.99	0.095	0.094	0.151
Nov	0.046	0.039	0.042	0.018	0.016	0.012	0.154	0.146	0.158	1.36	1.69	1.37	1.89	1.87	2.11	0.085	0.094	0.146
Dec	0.040	0.039	0.039	0.021	0.012	0.010	0.150	0.149	0.158	1.47	1.58	1.39	1.78	1.83	1.96	0.092	0.120	0.159
ANNUAL	0.060	0.042	0.041	0.018	0.014	0.014	0.167	0.152	0.155	1.66	1.69	1.61	1.80	1.81	1.93	0.086	0.099	0.145

Indian Springs calculation revised in 2021

Non-Discharging Facilities

Boulder City				
(Avg. in MGD)			(Total in MG)	
Month	Influent Flow	Reuse	Influent Flow	Reuse
Jan	1.08	0.12	33.5	3.72
Feb	1.08	0.11	30.2	3.08
Mar	1.08	0.13	33.5	4.03
Apr	1.1	0.08	33	2.4
May	1.14	0.08	35.30	2.48
Jun	1.13	0.10	33.90	3.00
Jul	1.15	0.06	35.70	1.86
Aug	1.18	0.15	36.60	4.65
Sep	1.16	0.15	34.80	4.50
Oct	1.13	0.14	34.70	4.34
Nov	1.11	0.17	33.30	5.10
Dec	1.11	0.01	34.40	2.48
Annual	1.12	0.11	408.90	41.64

Las Vegas Wash and Colorado River Dischargers (2023)

Month	Clark County Water Reclamation District*					City of Las Vegas						City of Henderson			City of North Las Vegas		
	Influent Flow	Main Plant Reuse	DBWRC Reuse	Total Reuse	Net to LV Wash	Influent Flow	WPCF Reuse	BMWRC Reuse	DHWRC Reuse	Total Reuse	Net to LV Wash	Influent Flow	Reuse	Net to LV Wash	Influent Flow	Reuse	Net to LV Wash
Jan	104.30	0.06	0.00	0.06	107.53	47.71	0.11	0.00	0.00	0.11	48.99	23.91	2.22	20.70	19.83	0.02	18.60
Feb	103.76	0.10	0.00	0.10	107.11	48.34	0.16	0.00	0.00	0.16	47.60	24.68	3.83	19.30	19.70	0.04	18.47
Mar	104.62	0.18	0.00	0.18	107.43	47.70	0.16	0.00	0.00	0.16	46.78	24.20	3.95	19.06	19.71	0.15	18.36
Apr	105.60	0.64	0.00	0.64	108.87	48.28	0.43	0.00	0.00	0.43	47.06	25.32	7.66	15.98	20.12	0.40	18.23
May	106.36	1.74	0.00	1.74	108.81	48.04	0.47	0.00	0.00	0.47	46.68	25.02	8.68	15.34	20.40	0.79	18.45
Jun	106.34	1.12	0.00	1.12	110.22	47.49	0.50	0.00	0.00	0.50	45.76	24.81	9.23	14.52	20.30	0.81	18.23
Jul	110.07	3.85	0.00	3.85	111.65	48.00	0.77	0.00	0.00	0.77	46.38	26.35	9.46	14.55	20.80	0.95	18.60
Aug	111.75	2.78	0.00	2.78	114.54	47.31	0.60	0.00	0.00	0.60	47.80	26.61	10.31	14.13	21.37	0.62	19.49
Sep	115.43	1.02	0.00	1.02	116.04	48.12	0.67	0.00	0.00	0.67	48.60	26.07	9.59	15.06	21.10	0.42	19.45
Oct	111.22	0.74	0.00	1.02	111.69	46.15	0.59	0.00	0.00	0.59	46.64	26.44	7.50	16.85	20.62	0.49	18.93
Nov	109.60	0.40	0.00	1.02	111.30	46.51	0.35	0.00	0.00	0.35	47.14	25.42	4.53	19.76	20.45	0.12	19.16
Dec	109.01	0.13	0.00	1.02	110.06	46.52	0.17	0.00	0.00	0.17	47.27	23.13	4.02	19.96	20.32	0.07	16.12
Average	108.17	1.06	0.00	1.21	110.44	47.51	0.41	0.00	0.00	0.41	47.23	25.16	6.75	17.10	20.39	0.41	19.12
YTD total	1298.06	12.75	0.00	14.55	1325.25	570.17	4.97	0.00	0.00	4.97	566.70	301.96	80.98	205.21	244.72	4.88	222.09

Net to LV Wash is measured effluent at each treatment plant

Las Vegas Wash and Colorado River Dischargers (2023)

Month	Las Vegas Wash Discharge (Avg in MGD)			Discharge Directly to Colorado River (Avg in MGD)			Total Discharge (Totals in A/F)
	Influent Flow	Reuse	Net to LV Wash	Laughlin Influent Flow	Laughlin Reuse	Net to River	Effluent Flow
Jan	194.54	2.41	195.82	1.52	0.00	1.52	18,774.04
Feb	195.29	4.13	192.48	1.51	0.00	1.51	17,264.67
Mar	195.03	4.44	191.63	1.58	0.00	1.58	17,195.25
Apr	199.72	9.13	192.03	1.58	0.00	1.58	17,230.85
May	198.66	11.68	189.28	1.62	0.00	1.62	16,989.31
Jun	197.68	11.65	188.73	1.75	0.00	1.75	16,952.38
Jul	203.97	15.03	191.18	1.96	1.00	1.96	17,188.75
Aug	205.78	14.31	195.96	1.80	2.00	1.80	17,600.19
Sep	209.49	11.70	199.15	1.70	3.00	1.70	17,875.28
Oct	203.23	9.60	194.11	1.55	4.00	1.55	17,413.39
Nov	200.81	6.03	197.36	1.37	5.00	1.37	17,686.52
Dec	194.85	5.28	193.41	1.39	6.00	1.39	17,336.67
Annual Avg	199.92	8.78	193.43	1.61	1.75	1.61	209507.31

Water Production (2023)

(Totals in AF)

	Las Vegas Valley Water District			City of Henderson			City of North Las Vegas			Boulder City			Nellis Air Force Base			Totals	
Month	WELLS	SNWS	TOTAL	SNWS	BMI	TOTAL	WELLS	SNWS	TOTAL	RMTP	SNWS	TOTAL	WELL	SNWS	TOTAL	WELLS	SNWS
Jan	2	19,314	19,316	4,664	0	4,664	0	3,728	3,728	68	251	319	6.09	63	69	8	28,088
Feb	12	17,941	17,953	4,347	0	4,347	0	3,534	3,534	79	261	340	4.28	58	62	16	26,220
Mar	9	21,704	21,713	5,432	0	5,432	0	4,084	4,084	113	326	439	10.05	66	76	19	31,725
Apr	5,388	19,904	25,292	6,294	0	6,294	0	4,587	4,587	261	463	723	22.49	76	99	5,410	31,585
May	6,484	25,042	31,526	8,731	0	8,731	0	5,662	5,662	371	595	966	19.92	77	97	6,504	40,478
Jun	7,415	25,291	32,706	9,114	0	9,114	0	5,756	5,756	382	643	1,025	16.33	83	100	7,431	41,269
Jul	6,976	30,939	37,915	10,452	0	10,452	0	6,520	6,520	485	768	1,253	8.13	106	114	6,984	49,270
Aug	5,951	28,898	34,849	9,962	0	9,962	0	6,184	6,184	388	668	1,056	10.04	100	110	5,961	46,200
Sep	5,702	23,359	29,061	7,796	0	7,796	0	5,265	5,265	330	555	885	13.16	84	97	5,715	37,388
Oct	5,132	22,399	27,531	7,244	0	7,244	0	5,117	5,117	293	544	837	13.45	77	90	5,145	35,674
Nov	2,438	19,361	21,799	5,658	0	5,658	0	4,279	4,279	163	376	540	9.25	31	40	2,447	29,868
Dec	1,437	18,650	20,087	4,958	0	4,958	872	4,032	4,904	106	323	429	5.81	22	28	1,444	28,092
YTD	46,946	272,802	319,748	84,652	0	84,652	872	58,748	59,619	3,039	5,774	8,813	139	843	982	47,086	425,858

Historic Trends Water Production
(Totals in AF)

Month	Las Vegas Valley Water District			City of Henderson			City of North Las Vegas			Boulder City			Big Bend Water District			Virgin Valley Water District			Moapa Valley Water District		
	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
Jan	19,734	20,327	19,316	4,946	4,935	4,664	3,773	3,915	3,728	453	413	319	201	220	203	381	395	332	157	160	120
Feb	18,489	18,957	17,953	4,650	4,680	4,347	3,539	3,649	3,534	483	442	340	216	211	193	345	376	336	142	145	126
Mar	23,496	24,921	21,713	6,102	6,240	5,432	4,371	4,586	4,084	628	616	439	244	228	208	449	488	369	194	181	148
Apr	27,257	26,926	25,292	7,266	7,092	6,294	4,825	4,856	4,587	870	780	723	260	251	228	546	588	500	213	233	214
May	33,792	33,411	31,526	9,325	8,986	8,731	5,721	5,764	5,662	1,093	1,024	966	292	283	265	667	686	651	297	263	252
Jun	37,597	35,956	32,706	10,133	9,869	9,114	6,262	6,234	5,756	1,265	1,145	1,025	318	298	270	800	752	692	320	307	261
Jul	38,902	38,811	37,915	10,352	9,737	10,452	6,612	6,532	6,520	1,233	1,114	1,253	302	331	310	835	806	803	313	335	348
Aug	39,072	35,792	34,849	10,295	9,385	9,962	6,569	6,015	6,184	1,242	929	1,056	311	307	313	848	727	718	306	308	295
Sep	33,330	32,370	29,061	8,994	8,414	7,796	5,460	5,344	5,265	1,094	920	885	291	290	298	773	681	605	287	263	254
Oct	28,794	28,890	27,531	7,501	7,545	7,244	5,107	5,344	5,117	815	765	837	260	272	276	617	644	602	226	246	217
Nov	23,359	22,309	21,799	6,003	5,741	5,658	4,370	5,344	4,279	638	497	540	238	235	234	484	476	493	185	194	177
Dec	20,561	20,741	20,087	5,256	5,174	4,958	4,019	5,344	4,904	453	385	429	220	220	226	393	398	412	143	136	177
ANNUAL	344,383	339,413	319,748	90,823	87,798	84,652	60,627	62,926	59,619	10,266	9,029	8,813	3,152	3,145	3,023	7,137	7,018	6,512	2,783	2,771	2,588

Wastewater/Water Production Ratios

Month	City of Las Vegas/Clark County*			City of Henderson			City of North Las Vegas			Boulder City			Big Bend Water District			All Entities **		
	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
Jan	0.67	0.67	0.75	0.48	0.49	0.49	0.45	0.44	0.51	0.25	0.26	0.32	0.70	0.63	0.71	0.60	0.60	0.66
Feb	0.64	0.65	0.73	0.45	0.45	0.49	0.43	0.42	0.48	0.22	0.22	0.27	0.60	0.62	0.67	0.58	0.58	0.64
Mar	0.58	0.56	0.67	0.40	0.38	0.42	0.39	0.38	0.46	0.18	0.18	0.23	0.62	0.69	0.72	0.52	0.50	0.59
Apr	0.49	0.51	0.56	0.33	0.33	0.37	0.34	0.34	0.40	0.13	0.13	0.14	0.60	0.61	0.64	0.44	0.45	0.50
May	0.42	0.42	0.47	0.26	0.27	0.27	0.29	0.30	0.34	0.11	0.10	0.11	0.58	0.61	0.58	0.37	0.37	0.40
Jun	0.37	0.38	0.43	0.24	0.23	0.25	0.27	0.27	0.32	0.09	0.09	0.10	0.54	0.53	0.60	0.33	0.33	0.38
Jul	0.38	0.39	0.40	0.25	0.24	0.24	0.27	0.27	0.30	0.09	0.10	0.09	0.67	0.57	0.60	0.34	0.34	0.35
Aug	0.38	0.42	0.43	0.25	0.26	0.25	0.27	0.30	0.33	0.09	0.12	0.11	0.55	0.55	0.55	0.34	0.37	0.38
Sep	0.42	0.45	0.52	0.27	0.28	0.31	0.31	0.33	0.37	0.10	0.11	0.12	0.53	0.55	0.53	0.38	0.40	0.45
Oct	0.49	0.53	0.55	0.34	0.31	0.35	0.34	0.36	0.38	0.13	0.13	0.13	0.59	0.61	0.53	0.44	0.46	0.48
Nov	0.58	0.63	0.66	0.40	0.39	0.41	0.38	0.41	0.44	0.17	0.20	0.19	0.53	0.66	0.54	0.51	0.55	0.58
Dec	0.67	0.69	0.74	0.47	0.44	0.44	0.43	0.45	0.39	0.24	0.27	0.25	0.64	0.68	0.59	0.60	0.61	0.64
AVG.	0.48	0.50	0.55	0.32	0.32	0.33	0.34	0.34	0.38	0.13	0.14	0.14	0.59	0.61	0.60	0.43	0.44	0.48

Water Production and Waste Flows

Monthly Flows in A/F

Month	CLV and Clark County Monthly Flow in AF		City of Henderson Monthly Flow in AF		City of North Las Vegas Monthly Flow in AF		Boulder City Monthly Flow in AF		Big Bend Water District Monthly Flow in AF		All Entities Monthly Flow in AF	
	Water Production	Waste Flow	Water Production	Waste Flow	Water Production	Waste Flow	Water Production	Waste Flow	Water Production	Waste Flow	Water Production	Waste Flow
Jan	19,316	14,462	4,664	2,275	3,728	1,887	319	103	203	145	28,230	18,753
Feb	17,953	13,070	4,347	2,121	3,534	1,693	340	93	193	130	26,367	17,000
Mar	21,713	14,491	5,432	2,302	4,084	1,875	439	103	208	150	31,877	18,793
Apr	25,292	14,167	6,294	2,331	4,587	1,852	723	101	228	145	37,124	18,597
May	31,526	14,689	8,731	2,380	5,662	1,941	966	108	265	154	47,149	19,087
Jun	32,706	14,163	9,114	2,284	5,756	1,869	1,025	104	270	161	48,871	18,390
Jul	37,915	15,038	10,452	2,507	6,520	1,979	1,253	110	310	186	56,450	19,610
Aug	34,849	15,132	9,962	2,532	6,184	2,033	1,056	112	313	171	52,364	19,802
Sep	29,061	15,057	7,796	2,400	5,265	1,943	885	107	298	157	43,305	19,512
Oct	27,531	15,162	7,244	2,515	5,117	1,962	837	106	276	148	41,005	19,732
Nov	21,799	14,373	5,658	2,340	4,279	1,883	540	102	234	126	32,509	18,705
Dec	20,087	14,796	4,958	2,200	4,904	1,933	429	106	226	132	29,733	19,054
YTD	319,748	174,600	84,652	28,188	59,619	22,849	8,813	1,255	3,023	1,805	474,984	227,035

Recharge and Recovery

Monthly Flows In Acre-Feet

Month	Recharged			Recovered			
	LVVWD	NLV	Total	LVVWD	LV Paiute	NLV	Total
Jan	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0
Jun	0	0	0	0	0	0	0
Jul	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0
Sep	0	0	0	113	0	0	0
Oct	0	0	0	255	0	0	0
Nov	0	0	0	191	0	0	0
Dec	0	0	0	79	0	0	0
Total 2023	0	0	0	638	0	0	0
Total 2022	0	0	0	797	0	0	0
Total 2021	0	0	0	688	0	0	0