

SEWAGE AND WASTEWATER ADVISORY COMMITTEE
Advisory to the Board of Clark County Commissioners

Conveyed virtually in accordance with changes to Open Meeting Law during the 2021 Legislative Session
Meeting Minutes of November 2, 2022

MEMBERS	Present	Absent
Clark County (2 Members)		
John Solvie (Member)	X	
VACANT (Member)		
Joseph Leedy (Alternate)	X	
Sara Gedo (Alternate)		X
City of Las Vegas (3 Members)		
VACANT (Member)		
John Bettencourt (Member)	X	
VACANT (Member)		
Charles Trushel (Alternate)		X
Nalleli Herrera (Alternate)	X	
Dan Combs (Alternate)		X
City of Henderson (2 Members)		
Brian Carlson (Member)	VICE-CHAIR	X
Adrian Edwards (Member)	X	
Bryan Mortensen (Alternate)	X	
James Koloskie (Alternate)	X	
City of North Las Vegas (1 Member)		
Frazier Speaks (Member)		X
Daniel Ybarra (Alternate)		X
Clark County Water Reclamation District (1 Member)		
Daniel Fischer (Member)	CHAIR	X
Richard Donahue (Alternate)	X	
Moapa Valley Water District (1 Member)		
Joe Davis (Member)		X
Lon Dalley (Alternate)	X	
Las Vegas Valley Water District (1 Member)		
Todd Tietjen (Member)	X	
Xiaoping Zhou (Alternate)	X	
Mesquite (1 Member)		
Bill Tanner (Member)		X
Travis Anderson (Alternate)		X
Virgin Valley Water District (1 Member)		
VACANT (Member)		
Aaron Bunker (Alternate)		X
Boulder City (1 Member)		
Joseph Stubitz (Member)	X	
Jim Keane (Alternate)		X

Guests Present

Daylin Sigler
Elise Nguyen
AJ Rodrigues
Alan Wolfley
JD Dotchin

Clark County
Clark County
CCWRD
CNLV
NDEP

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 9:03 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 AUGUST 3, 2022

Todd Tietjen moved and John Bettencourt seconded to accept the August 3, 2022 minutes. The motion was unanimously approved.

4. APPROVAL OF AGENDA

John Bettencourt moved and Todd Tietjen seconded to approve the agenda. The motion was unanimously approved.

5. PRESENTATION: UPDATED FUTURE WATER QUALITY PLANNING SCENARIOS USING THE LAKE MEAD MODEL

6. DISCUSSION OF QUARTERLY FLOW REPORT

The group discussed the flow report for the third quarter of 2022:

- Henderson observed ~7% decreases in water production over the past 3 months. Likely impacted by the monsoon season.
- CLV wastewater flows were much higher than normal. Adjustments were made to the flow meter data because the original numbers were being artificially depressed.

7. MEMBER UPDATES

A. Moapa Valley Water District

- Nothing to report.

B. Las Vegas Valley Water District

- Observed a reduction in new connections.
- Resolved a gate failure that regulates flow into the AMS treatment plant.
- Preparing to implement overuse surcharge rates for some of the biggest water users.
- Efforts to move away from evaporative cooling is gaining momentum.
- Move towards septic conversion continues.
- Ongoing discussions regarding water conservation programs.
- Large construction activities are ongoing in the Lower Las Vegas Wash.
- The Wash was recently closed to conduct an engineering study for the new weirs to be installed downstream of North Shore Rd.

C. Boulder City

- Continuing to work with SNWA and the City of Henderson on indirect and direct reuse options.
- Estimate 1500 acre-feet of treated effluent is being discharged into the desert annually.

D. Virgin Valley Water District

- N/A

E. City of Mesquite

- N/A

F. City of Las Vegas

- O&M Updates:
 - Nothing to report.
- CIP Updates:
 - Nothing to report.
- Conducted a sewer rate study and associated fee increase, which was approved by the City Council.
- The plans for the treatment plant expansion were moved up several years, with construction is estimated to begin around 2028-2030.

G. Clark County Water Reclamation District

- Collection System Updates:
 - Construction of Lincoln Lift Station project has been delayed to March 2024.
 - Construction of Whitney Lift Station project is delayed to April 2023.
 - Conducted a pilot project at Whitney Lift Station to evaluate the feasibility of newly installed Vaughan Chopper Pumps. Since installation in January 2022, the equipment has not clogged. Planning to install 5 pumps in the new station.
 - Multiple projects to rehabilitate/replace defective small diameter pipe throughout the Collection System are on-going.
- The Flamingo Plant Updates:
 - Expansion is on-going.
 - New primary and preliminary treatment are under construction.
 - Secondary treatment with three new biological nutrient removal trains is under construction.
 - Construction of new sludge thickeners on the east campus is underway.
 - The demolition of some of the aged large-scale UV channels, silos, etc. on AWT is scheduled to begin next week. The purpose is to reclaim the land for future plant expansion.
 - Membrane ozone facility and a reclaim water pump station will remain standing.

H. City of North Las Vegas

- Began construction of the flow equalization basins.
- The work on the sludge conveyance system will be complete within a few weeks.

I. City of Henderson

- Phase 4 still at 30% range.
- Financial troubles. Reassessing priorities and strategies to achieve them.

- Received shipment of membranes. The project to replace three membrane trains over the next three years is expected to begin soon.

J. Clark County

- New MS4 Permit – Still awaiting EPA review. Stormwater regulatory program assessments will soon be performed on all MS4 co-permittees.
- Selenium – The State Environmental Commission Hearing to approve two NDEP selenium petitions is scheduled for December 14th. One petition to adopt site-specific standards for Lower Las Vegas Wash, and the other petition to exempt Upper Las Vegas Wash and Tributaries for Selenium and all parameters on the 303(d) list.
- Draft Construction General Permit – NDEP scheduled a Public Hearing on November 16th in response to public comments received by numerous agencies and groups. The permit requirements pose significant impacts to public and private projects.

8. MEMBER VACANCIES

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

9. COMMENTS BY THE GENERAL PUBLIC - None

10. SCHEDULE NEXT MEETING

The next meeting is scheduled for February 1, 2023 at 9:00 am. A meeting invite will be sent out.

11. ADJOURNMENT

The meeting was adjourned at 10:34 am.

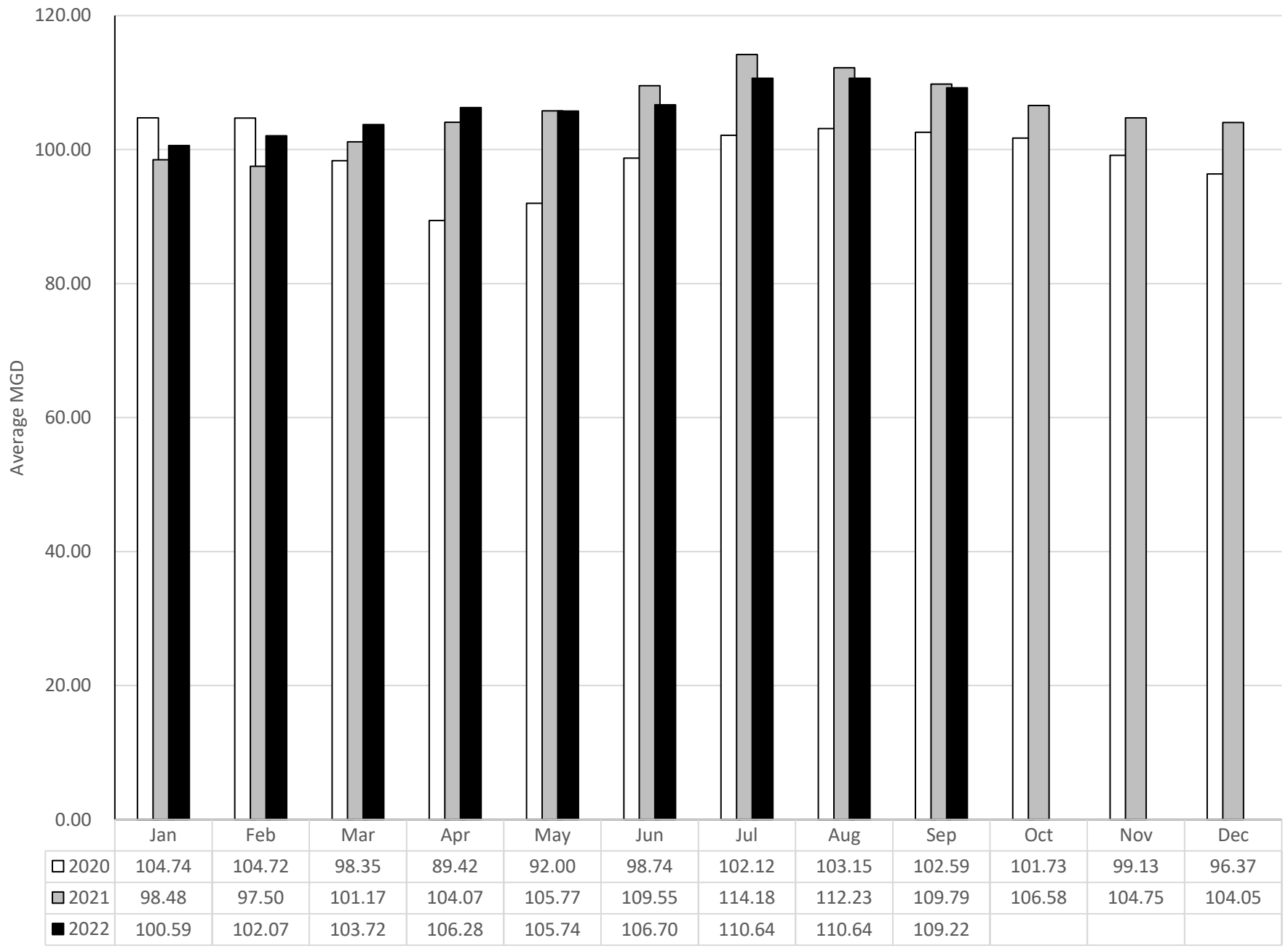
2022
3rd Quarter Flow Report
For
Clark County Sewage
And
Wastewater Advisory
Committee
(SWAC)

November 1, 2022

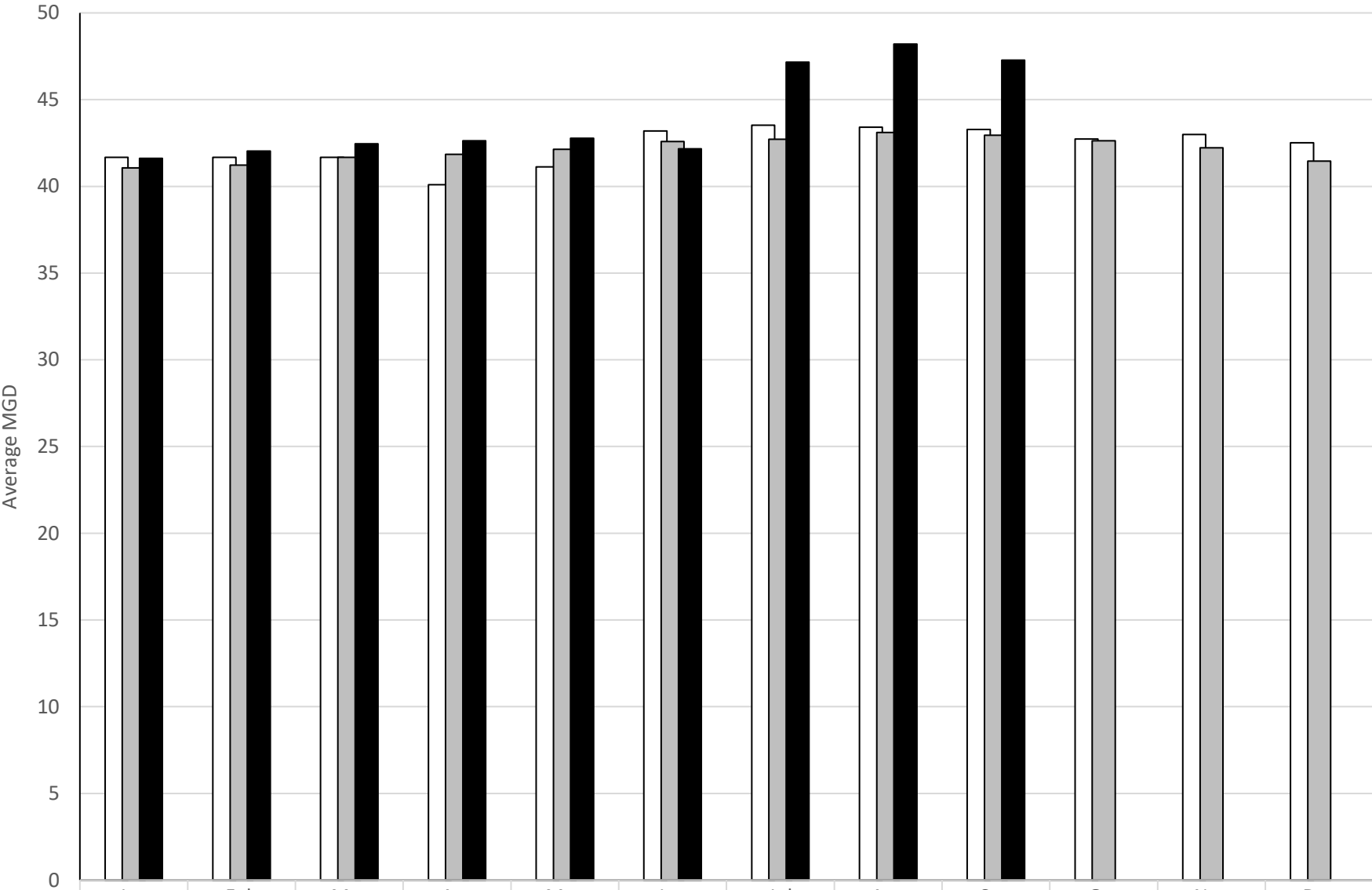
Wastewater Flows

2020 through 2022

Clark County Water Reclamation District Wastewater Flows

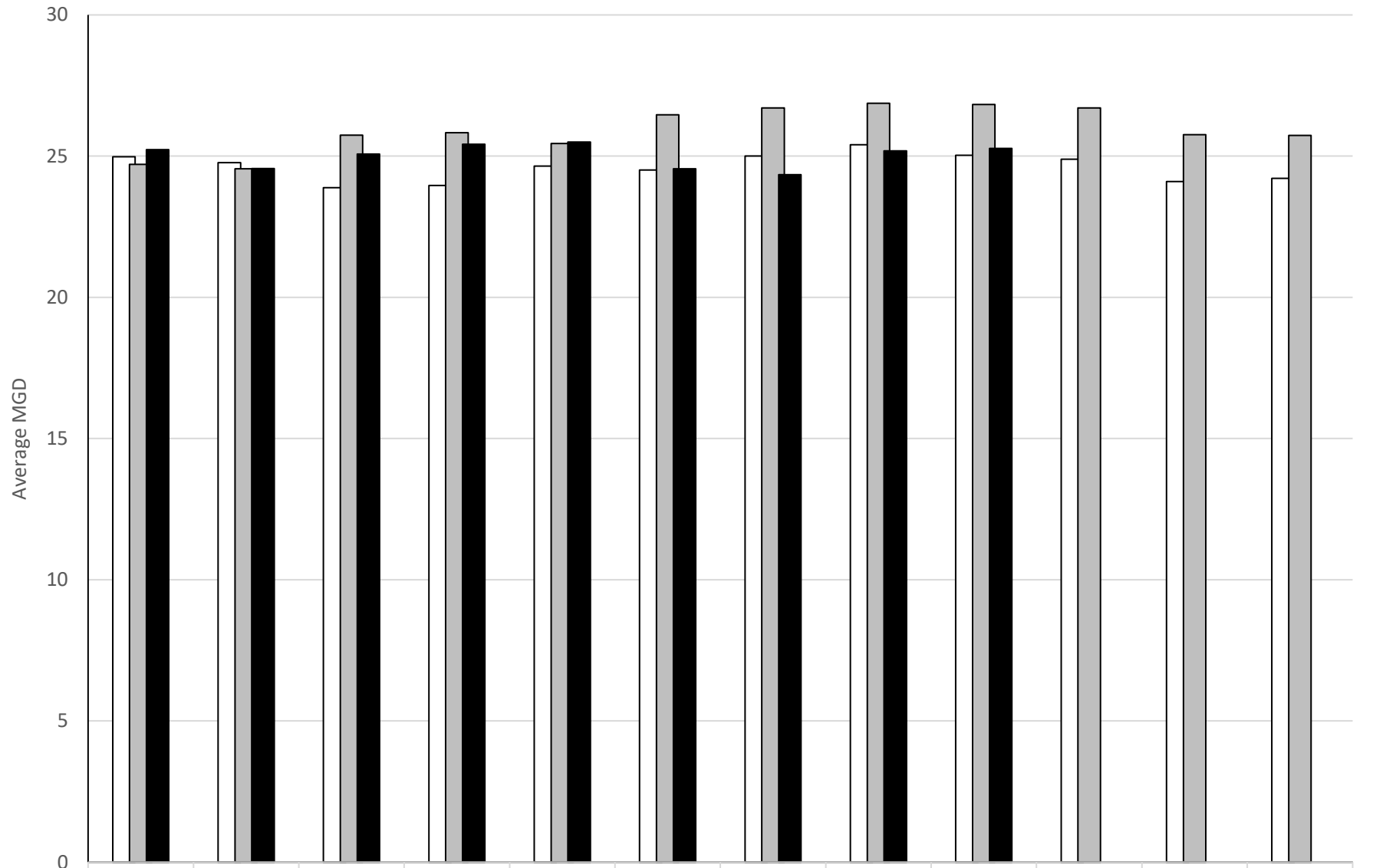


City of Las Vegas Wastewater Flows



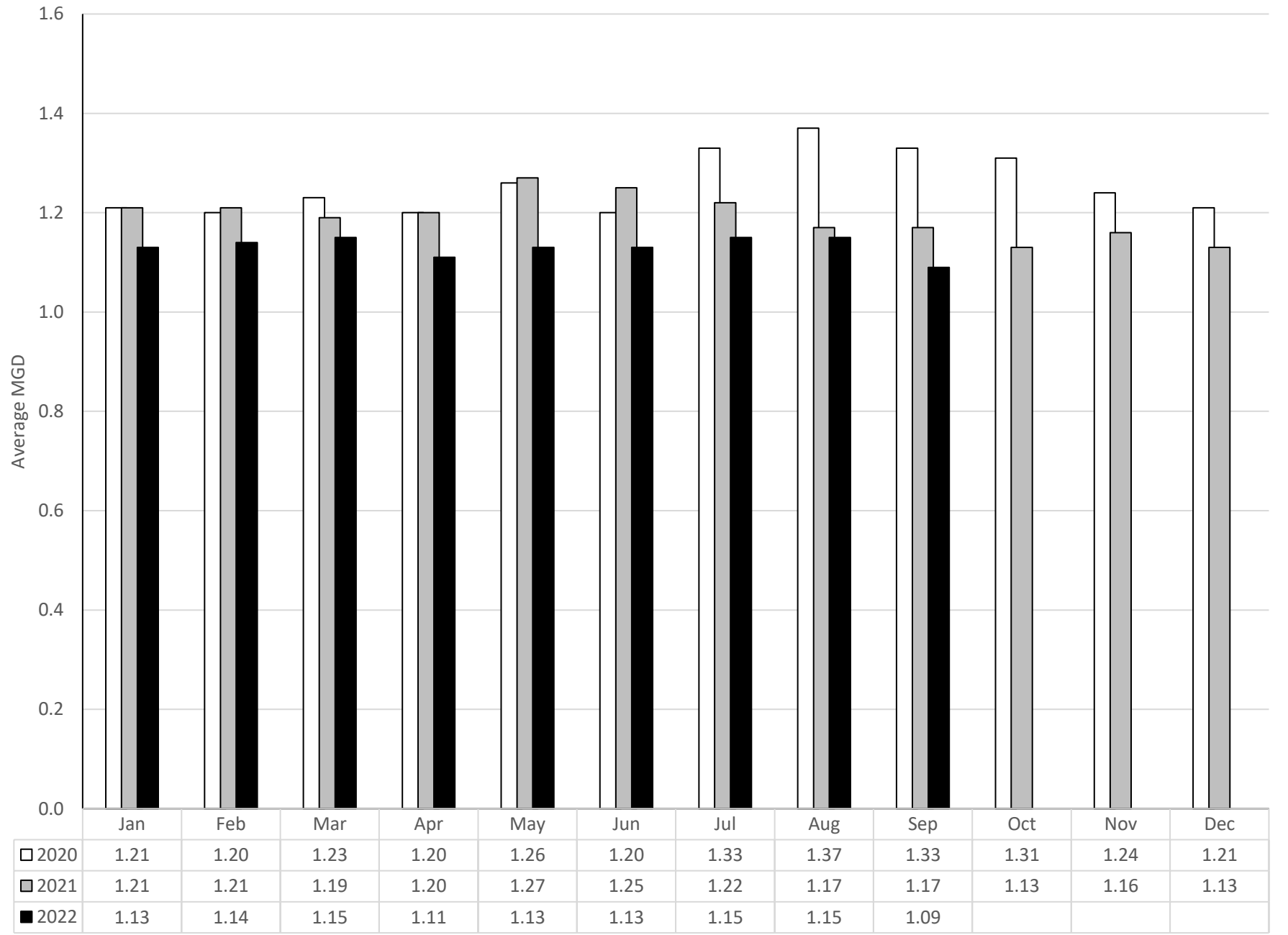
□ 2020	41.67	41.68	41.67	40.09	41.13	43.20	43.52	43.41	43.28	42.73	42.99	42.52
■ 2021	41.06	41.23	41.67	41.84	42.14	42.58	42.71	43.10	42.95	42.63	42.22	41.46
■ 2022	41.62	42.04	42.45	42.63	42.78	42.16	47.16	48.20	47.28			

City of Henderson Wastewater Flows

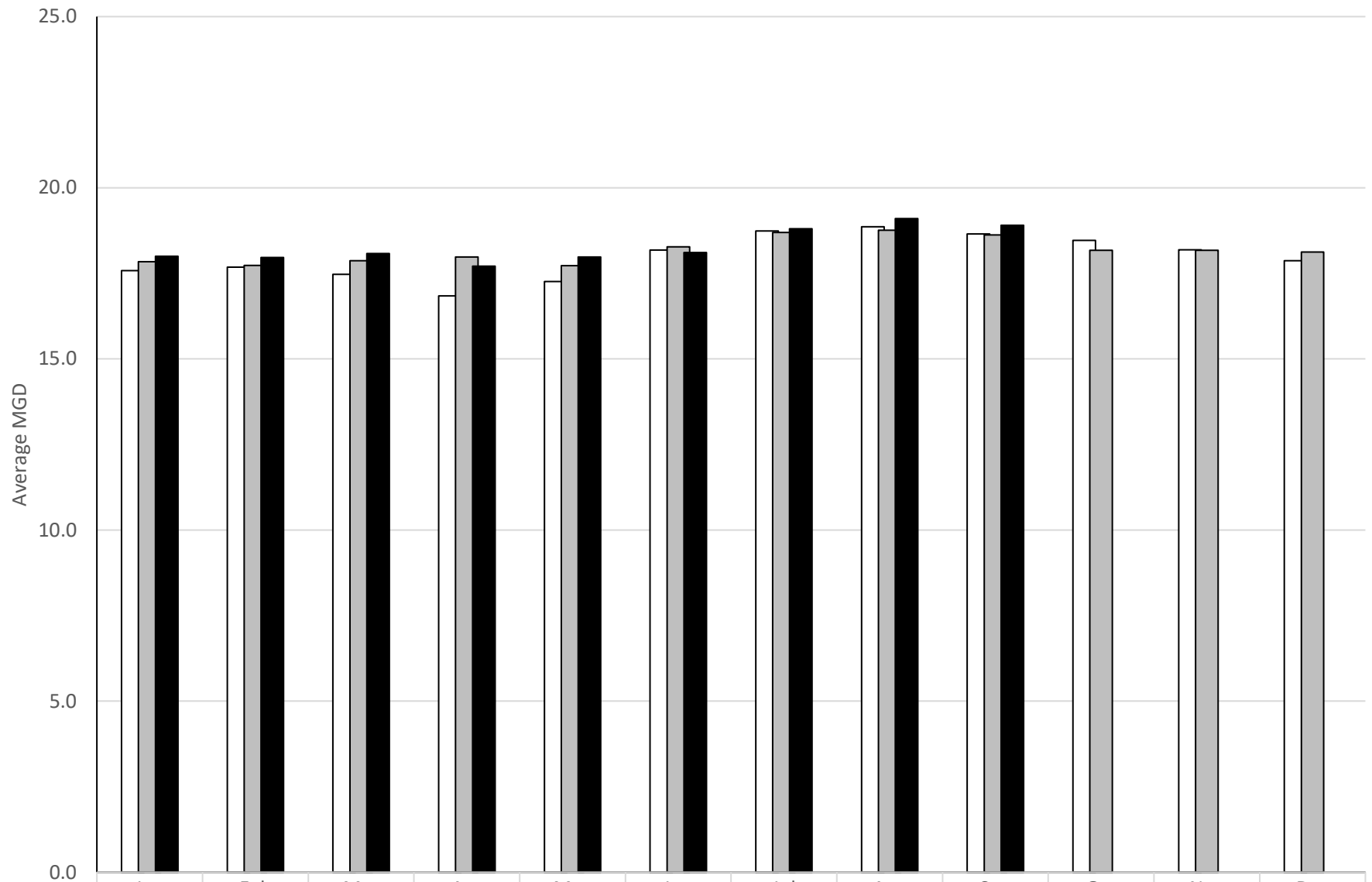


□ 2020	24.98	24.77	23.88	23.96	24.65	24.51	25.00	25.40	25.03	24.89	24.10	24.21
■ 2021	24.71	24.55	25.74	25.83	25.45	26.46	26.71	26.87	26.83	26.71	25.76	25.73
■ 2022	25.23	24.56	25.07	25.42	25.50	24.55	24.34	25.19	25.27			

Boulder City Wastewater Flows

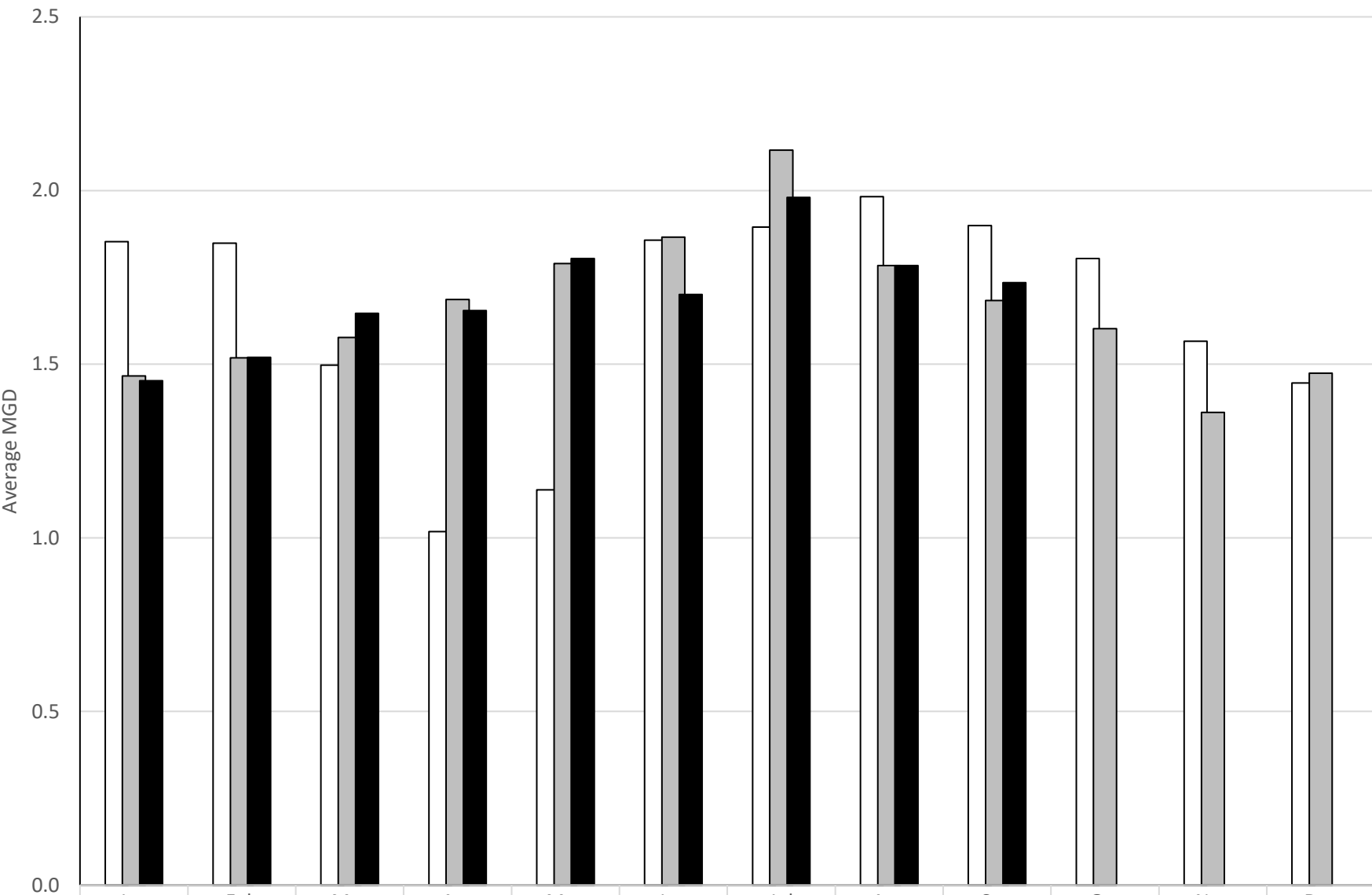


City of North Las Vegas Wastewater Flows



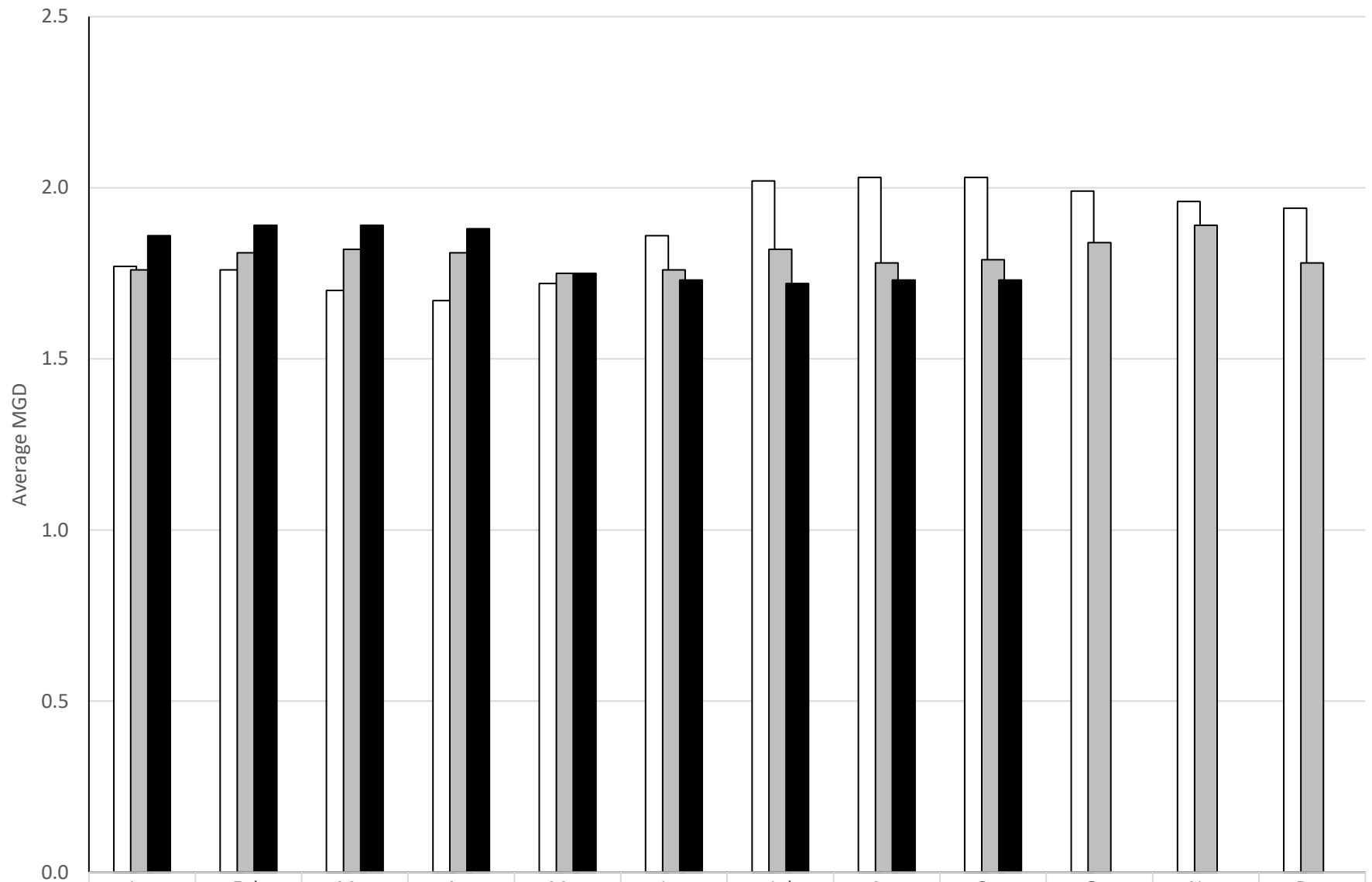
□ 2020	17.58	17.68	17.47	16.84	17.26	18.18	18.74	18.86	18.65	18.46	18.19	17.87
■ 2021	17.84	17.73	17.87	17.98	17.72	18.27	18.69	18.76	18.62	18.17	18.17	18.12
■ 2022	18.00	17.96	18.08	17.71	17.98	18.11	18.80	19.10	18.90			

Laughlin Wastewater Flows



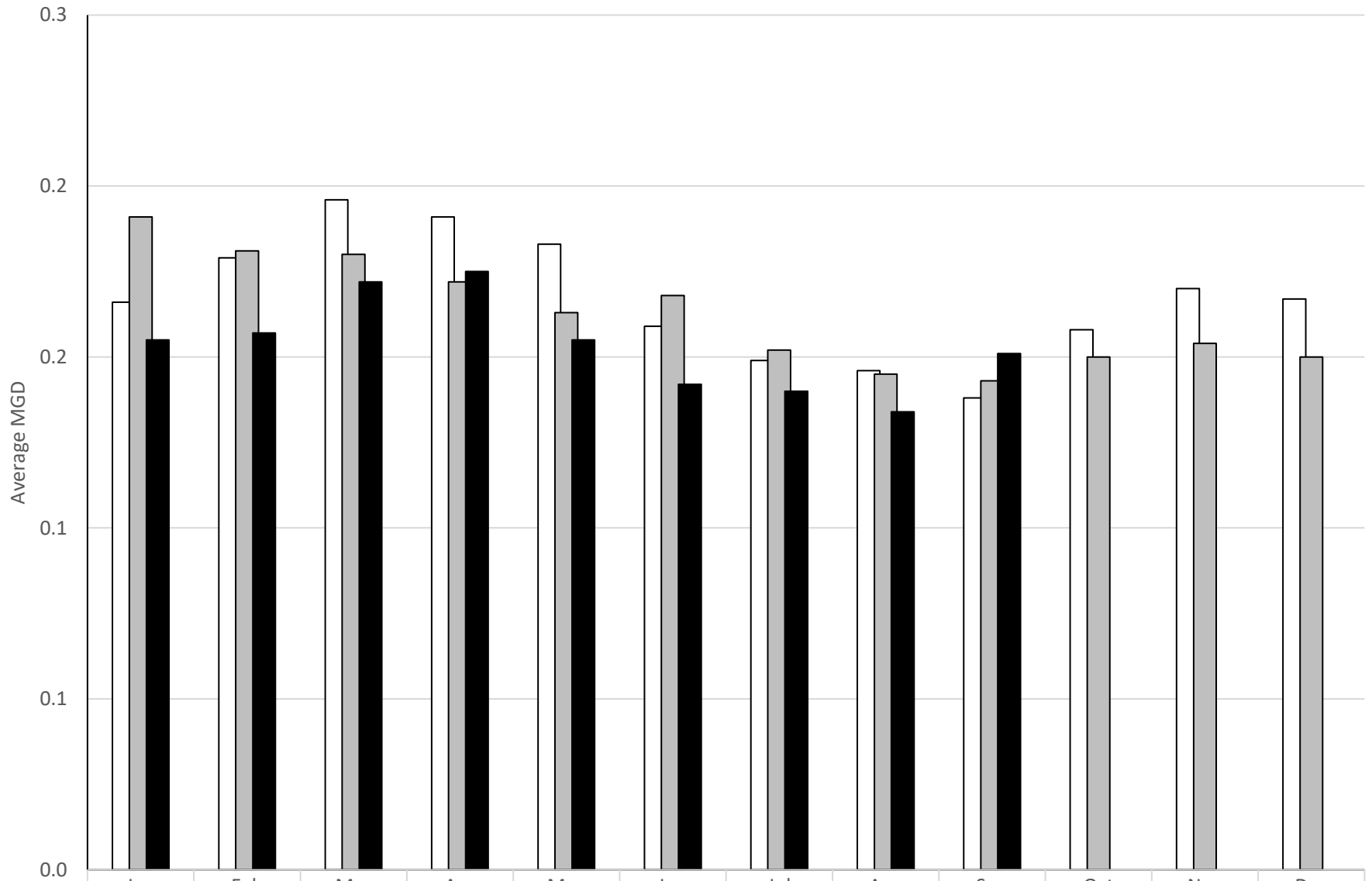
□ 2020	1.85	1.85	1.50	1.02	1.14	1.86	1.90	1.98	1.90	1.80	1.57	1.45
■ 2021	1.47	1.52	1.58	1.69	1.79	1.87	2.12	1.78	1.68	1.60	1.36	1.47
■ 2022	1.45	1.52	1.65	1.65	1.80	1.70	1.98	1.78	1.74			

City of Mesquite Wastewater Flows



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	1.77	1.76	1.70	1.67	1.72	1.86	2.02	2.03	2.03	1.99	1.96	1.94
2021	1.76	1.81	1.82	1.81	1.75	1.76	1.82	1.78	1.79	1.84	1.89	1.78
2022	1.86	1.89	1.89	1.88	1.75	1.73	1.72	1.73	1.73			

Moapa Wastewater Flows

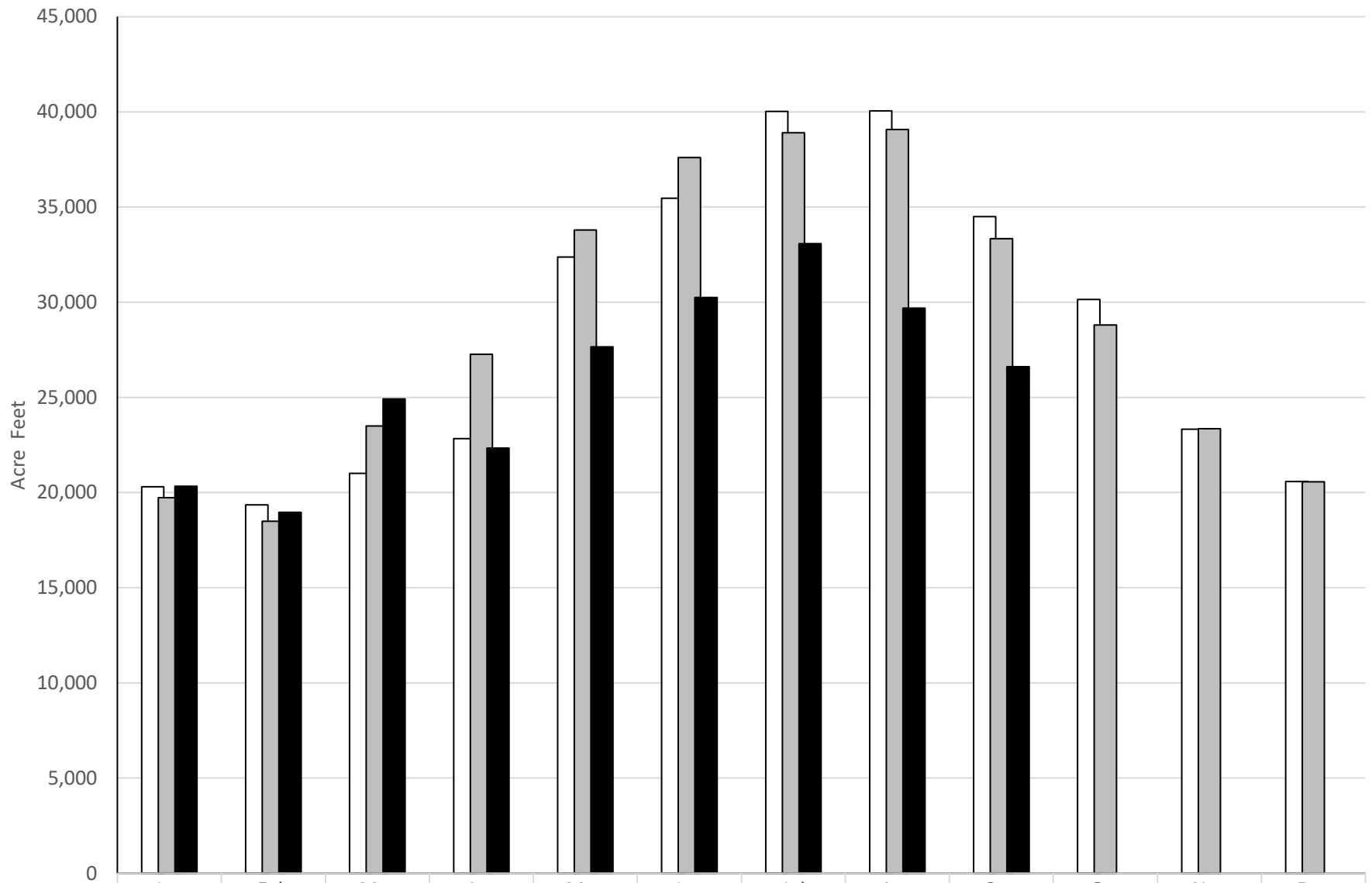


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	0.166	0.179	0.196	0.191	0.183	0.159	0.149	0.146	0.138	0.158	0.170	0.167
2021	0.191	0.181	0.180	0.172	0.163	0.168	0.152	0.145	0.143	0.150	0.154	0.150
2022	0.155	0.157	0.172	0.175	0.155	0.142	0.140	0.134	0.151			

Water Production

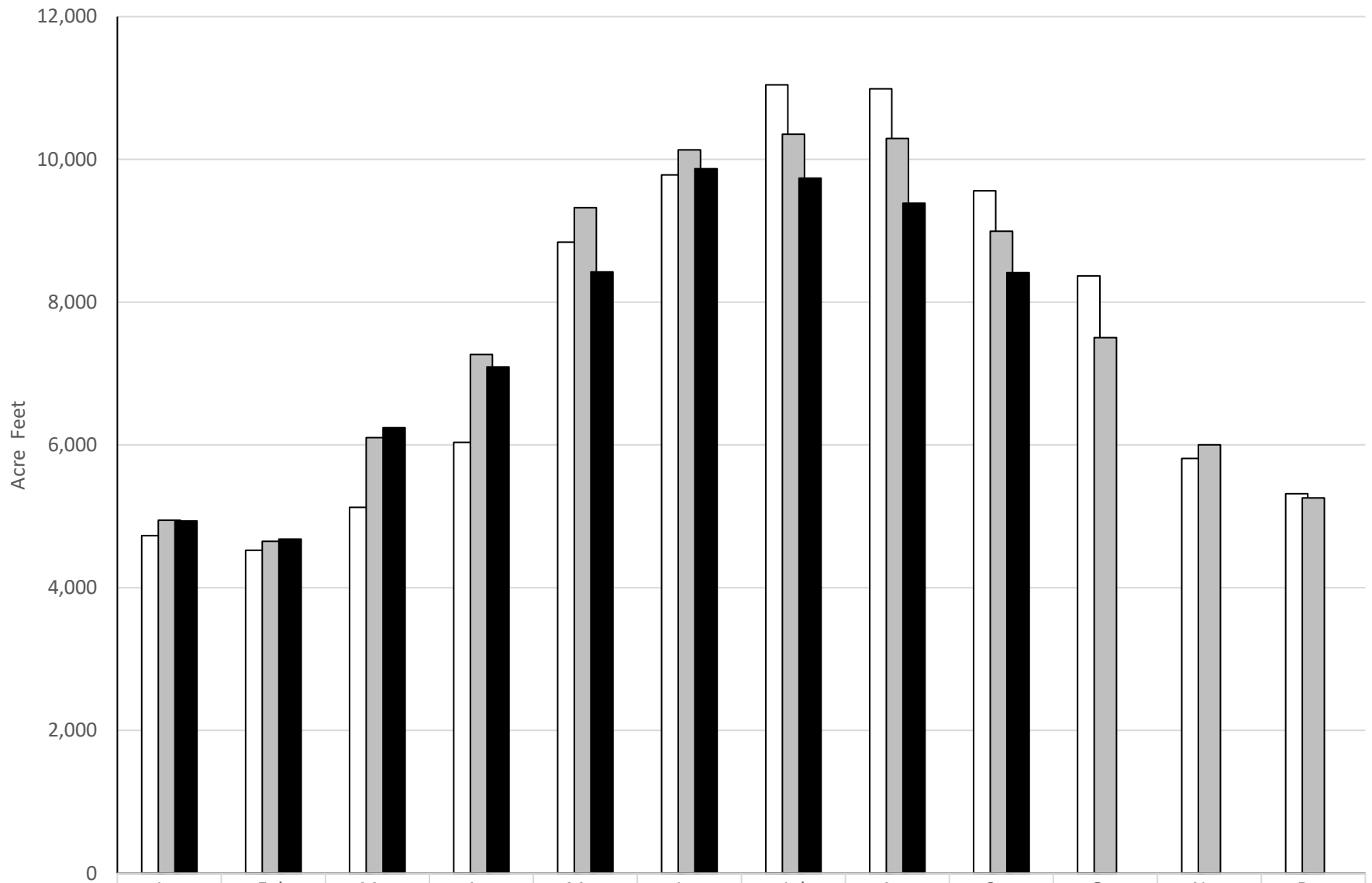
2020 through 2022

Las Vegas Valley Water District Water Production



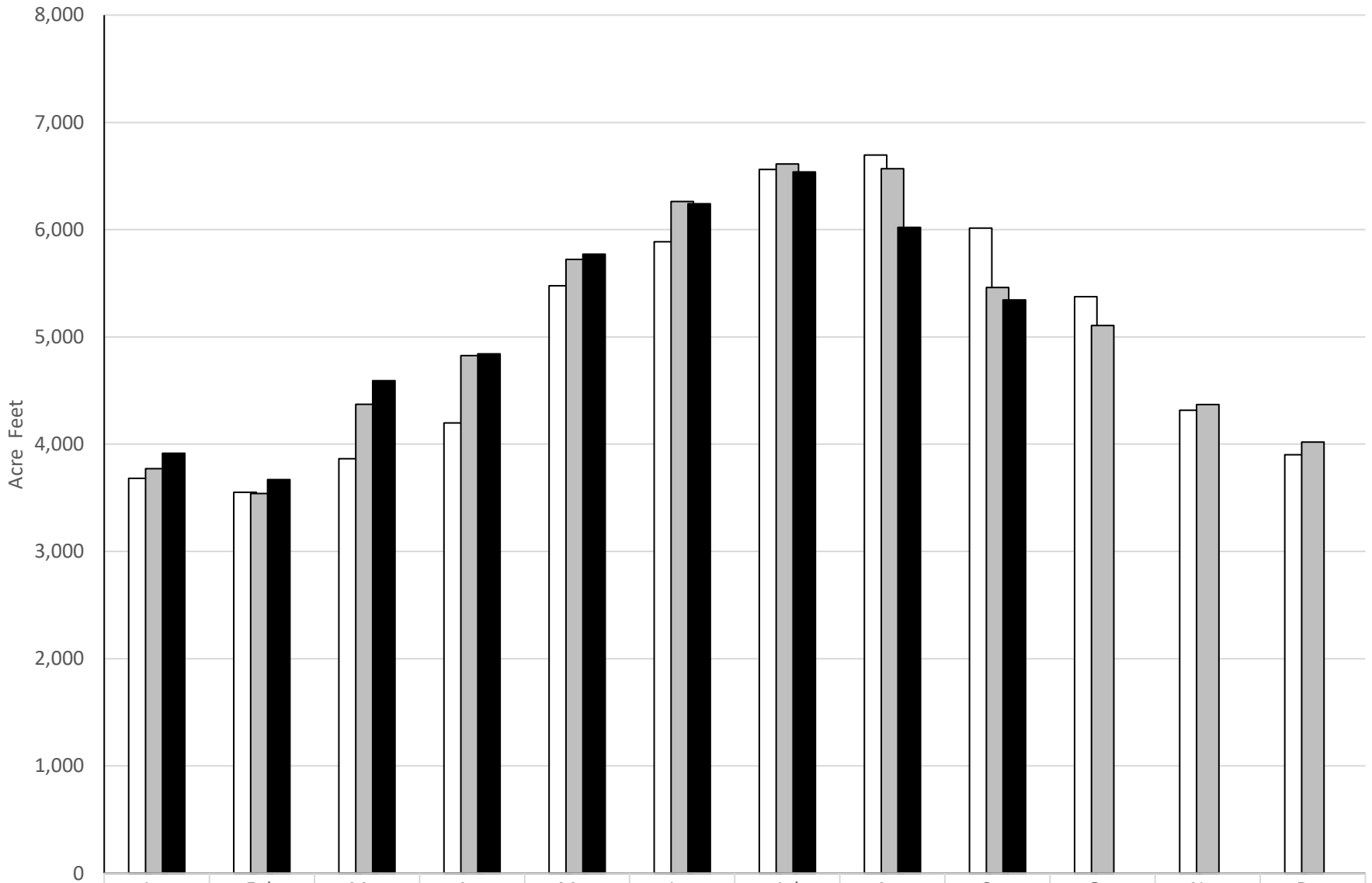
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	20,297	19,348	21,008	22,827	32,374	35,455	40,024	40,043	34,491	30,141	23,331	20,579
2021	19,734	18,489	23,496	27,257	33,792	37,597	38,902	39,072	33,330	28,794	23,359	20,561
2022	20,323	18,956	24,919	22,334	27,651	30,240	33,069	29,689	26,608			

City of Henderson Water Production



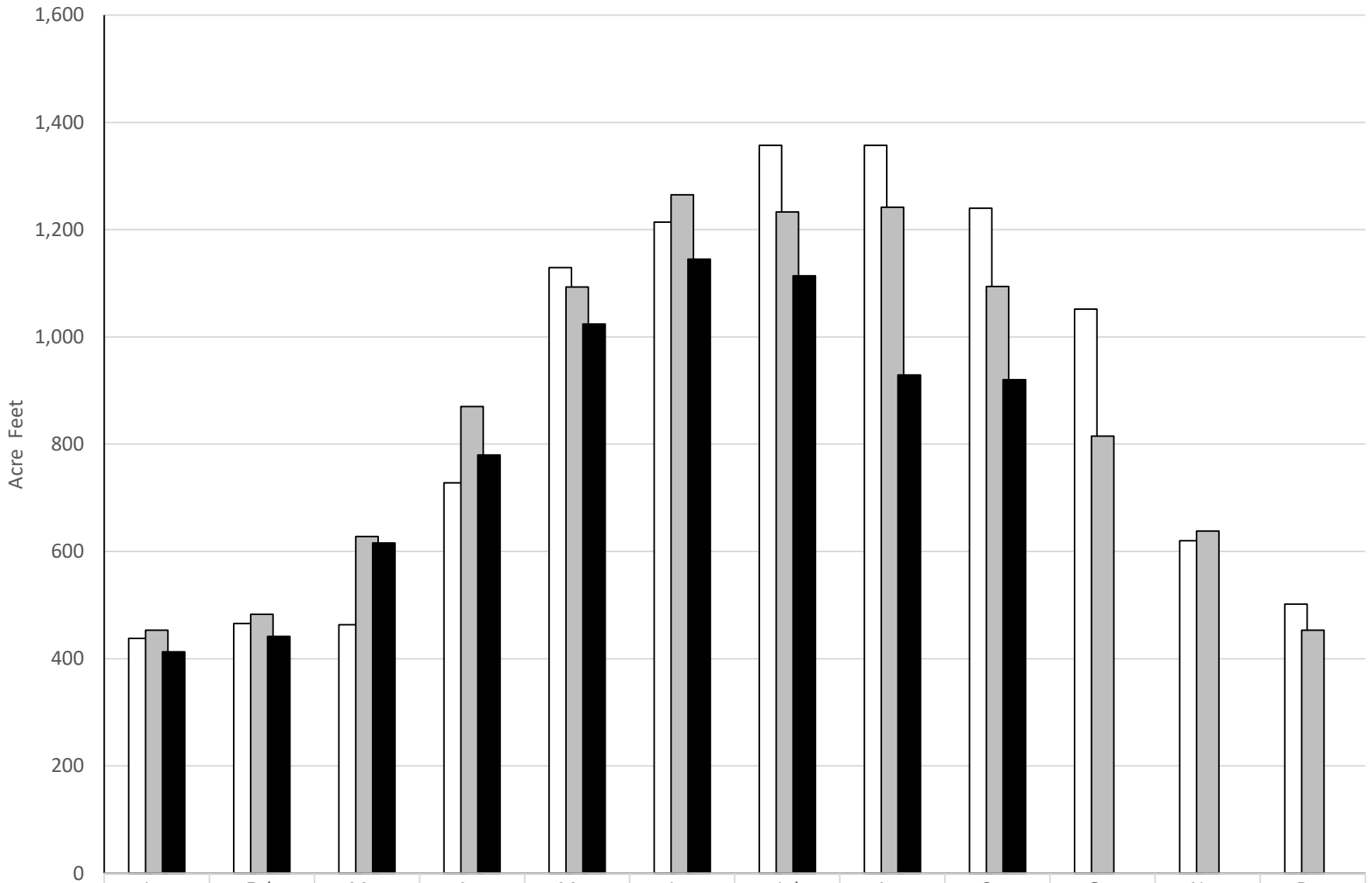
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	4,728	4,525	5,125	6,037	8,839	9,782	11,045	10,990	9,562	8,368	5,812	5,318
2021	4,946	4,650	6,102	7,266	9,325	10,133	10,352	10,295	8,994	7,501	6,003	5,256
2022	4,935	4,680	6,240	7,092	8,424	9,869	9,737	9,385	8,414			

City of North Las Vegas Water Production



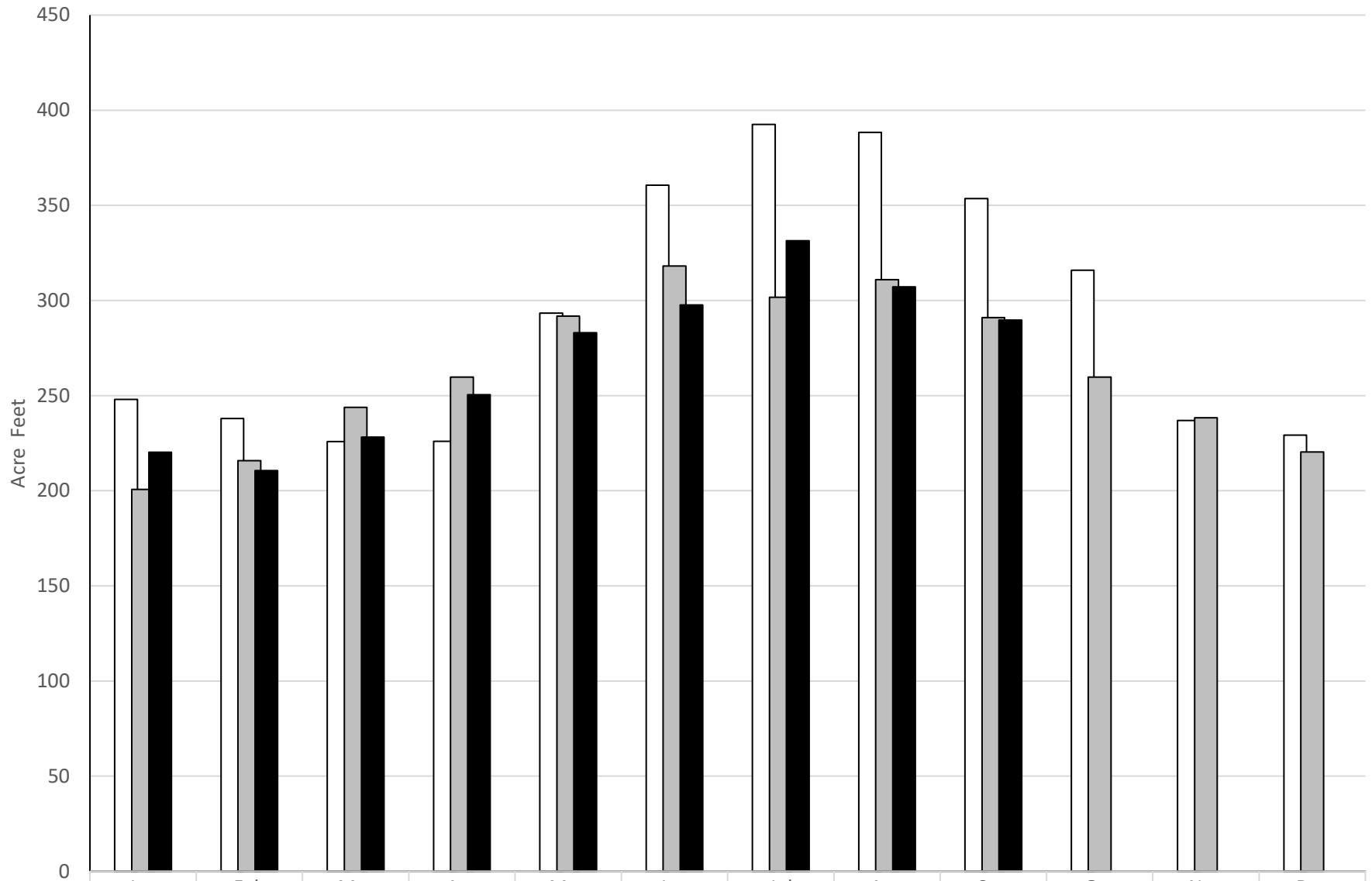
2020	3,682	3,551	3,865	4,198	5,478	5,887	6,562	6,695	6,015	5,375	4,316	3,902
2021	3,773	3,539	4,371	4,825	5,721	6,262	6,612	6,569	5,460	5,107	4,370	4,019
2022	3,915	3,670	4,592	4,843	5,771	6,241	6,537	6,020	5,344			

Boulder City Water Production



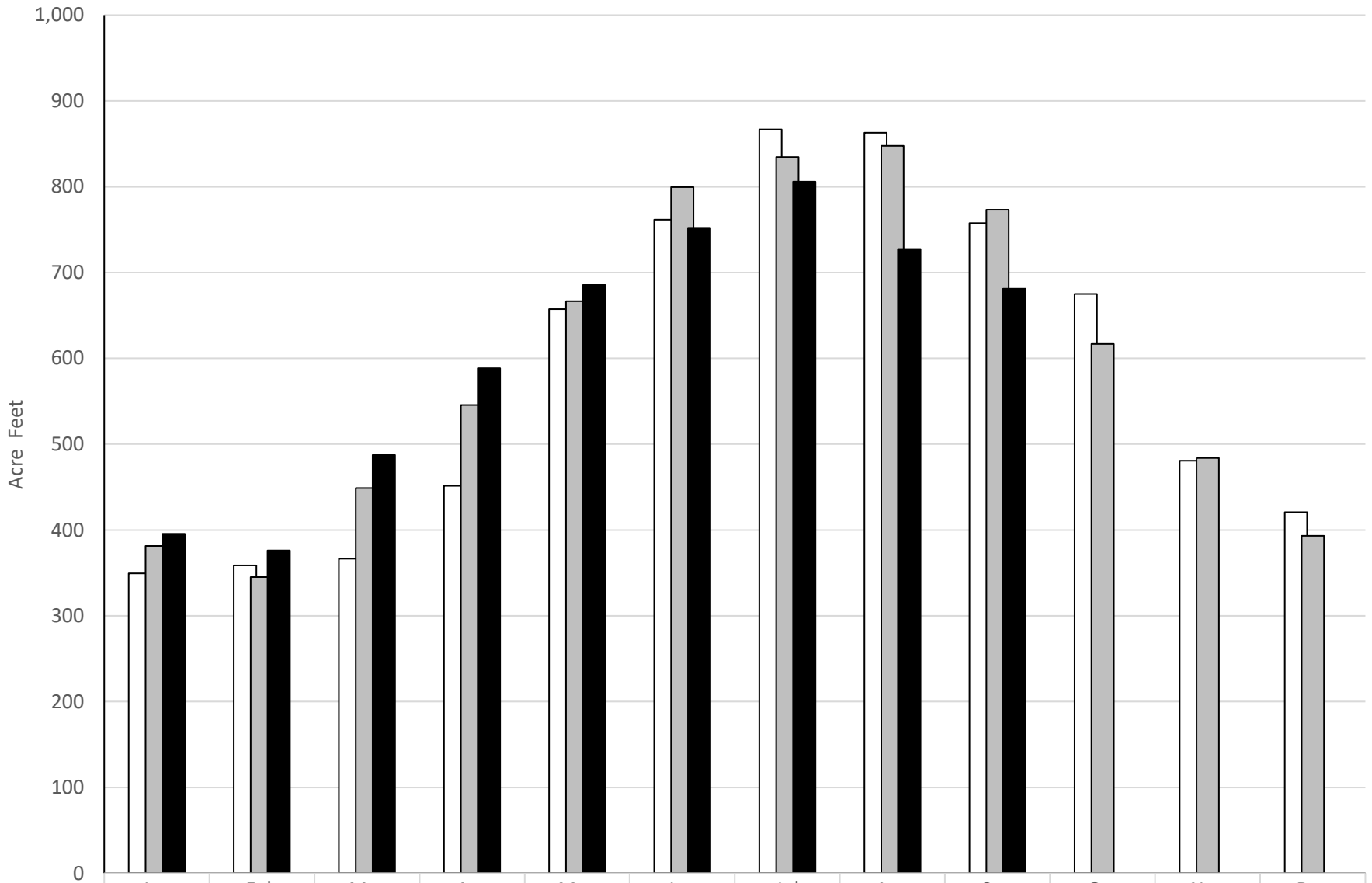
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	438	466	463	728	1,129	1,214	1,357	1,357	1,240	1,052	620	502
2021	453	483	628	870	1,093	1,265	1,233	1,242	1,094	815	638	453
2022	413	442	616	780	1,024	1,145	1,114	929	920			

Big Bend Water District Water Production



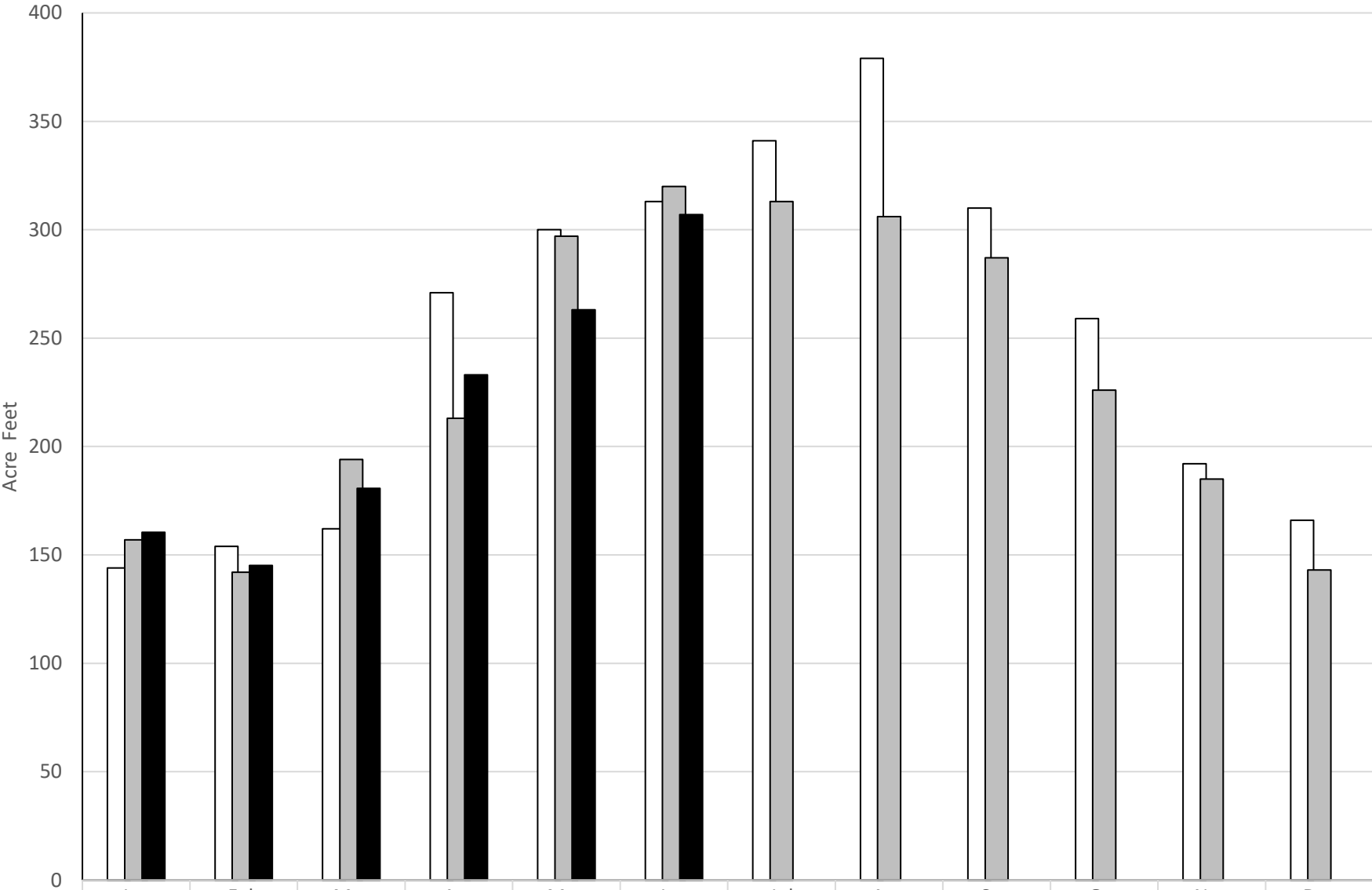
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	248	238	226	226	293	361	393	388	354	316	237	229
2021	201	216	244	260	292	318	302	311	291	260	238	220
2022	220	211	228	251	283	298	331	307	290			

Virgin Valley Water District Water Production



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	350	359	367	451	657	762	867	863	758	675	481	421
2021	381	345	449	546	667	800	835	848	773	617	484	393
2022	395	376	488	588	686	752	806	727	681			

Moapa Valley Water District Water Production



2020
 2021
 2022

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	144	154	162	271	300	313	341	379	310	259	192	166
2021	157	142	194	213	297	320	313	306	287	226	185	143
2022	160	145	181	233	263	307						

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		
	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
Jan	104.74	98.48	100.59	41.67	41.06	41.62	17.58	17.84	18.00	24.98	24.71	25.23	1.21	1.21	1.13
Feb	104.72	97.50	102.07	41.68	41.23	42.04	17.68	17.73	17.96	24.77	24.55	24.56	1.20	1.21	1.14
Mar	98.35	101.17	103.72	41.67	41.67	42.45	17.47	17.87	18.08	23.88	25.74	25.07	1.23	1.19	1.15
Apr	89.42	104.07	106.28	40.09	41.84	42.63	16.84	17.98	17.71	23.96	25.83	25.42	1.20	1.20	1.11
May	92.00	105.77	105.74	41.13	42.14	42.78	17.26	17.72	17.98	24.65	25.45	25.50	1.26	1.27	1.13
Jun	98.74	109.55	106.70	43.20	42.58	42.16	18.18	18.27	18.11	24.51	26.46	24.55	1.20	1.25	1.13
Jul	102.12	114.18	0.048	0.018	0.018	0.011	0.149	0.152	0.140	1.90	2.12	1.98	2.02	1.82	1.72
Aug	103.15	112.23	0.045	0.016	0.015	0.012	0.146	0.145	0.134	1.98	1.78	1.78	2.03	1.78	1.73
Sep	102.59	109.79	0.042	0.017	0.018	0.011	0.138	0.143	0.151	1.90	1.68	1.74	2.03	1.79	1.73
Oct	101.73	106.58		42.73	42.63		18.46	18.17		24.89	26.71		1.31	1.13	
Nov	99.13	104.75		42.99	42.22		18.19	18.17		24.10	25.76		1.24	1.16	
Dec	96.37	104.05		42.52	41.46		17.87	18.12		24.21	25.73		1.21	1.13	
ANNUAL	99.42	105.68	102.13	42.32	42.13	42.04	17.98	18.16	18.01	24.62	25.95	24.95	1.26	1.19	1.14

* Includes estimated .5 MGD NLV

Historic Trends Influent Wastewater Flows

Month	Searchlight			Blue Diamond			MVWRC			Laughlin			Mesquite			Indian Springs		
	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
Jan	0.033	0.030	0.041	0.018	0.017	0.017	0.166	0.191	0.155	1.85	1.47	1.45	1.77	1.76	1.86	0.121	0.072	0.088
Feb	0.041	0.029	0.042	0.016	0.020	0.026	0.179	0.181	0.157	1.85	1.52	1.52	1.76	1.81	1.89	0.118	0.073	0.091
Mar	0.030	0.034	0.039	0.019	0.020	0.017	0.196	0.180	0.172	1.50	1.58	1.65	1.70	1.82	1.89	0.113	0.074	0.095
Apr	0.026	0.027	0.043	0.015	0.016	0.015	0.191	0.172	0.175	1.02	1.69	1.65	1.67	1.81	1.88	0.108	0.082	0.095
May	0.030	0.340	0.044	0.023	0.016	0.010	0.183	0.163	0.155	1.14	1.79	1.80	1.72	1.75	1.75	0.125	0.082	0.098
Jun	0.032	0.028	0.042	0.015	0.014	0.009	0.159	0.168	0.142	1.86	1.87	1.70	1.86	1.76	1.73	0.121	0.081	0.101
Jul	0.034	0.042		0.018	0.018		0.149	0.152		1.90	2.12		2.02	1.82		0.117	0.092	
Aug	0.034	0.041		0.016	0.015		0.146	0.145		1.98	1.78		2.03	1.78		0.115	0.098	
Sep	0.033	0.030		0.017	0.018		0.138	0.143		1.90	1.68		2.03	1.79		0.109	0.104	
Oct	0.029	0.033		0.018	0.017		0.158	0.150		1.80	1.60		1.99	1.84		0.111	0.095	
Nov	0.028	0.046		0.015	0.018		0.170	0.154		1.57	1.36		1.96	1.89		0.096	0.085	
Dec	0.028	0.040		0.018	0.021		0.167	0.150		1.45	1.47		1.94	1.78		0.101	0.092	
ANNUAL	0.032	0.060	0.041	0.017	0.018	0.020	0.165	0.167	0.161	1.65	1.66	1.54	1.87	1.80	1.88	0.113	0.086	0.091

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	1.13	0.014	35	4.34
Feb	1.14	0.2	31.9	5.6
Mar	1.15	0.19	35.7	5.89
Apr	1.11	0.17	33.3	5.1
May	1.13	0.15	35.00	4.65
Jun	1.13	0.23	33.90	6.90
Jul	1.15	0.16	35.70	4.96
Aug	1.15	0.20	35.70	6.20
Sep	1.09	0.21	32.70	6.20
Oct				
Nov				
Dec				
Annual	1.13	0.16	204.80	32.48

Las Vegas Wash and Colorado River Dischargers (2022)

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	100.59	0.23	0.00	0.23	100.36	41.62	0.13	0.00	0.00	0.13	43.95	25.23	6.28	16.81	18.00	0.20	17.80
Feb	102.07	0.30	0.00	0.30	101.77	42.04	0.23	0.00	0.00	0.23	44.02	24.56	4.94	17.60	17.96	0.20	17.76
Mar	103.72	0.32	0.00	0.32	103.40	42.45	0.17	0.00	0.00	0.17	44.03	25.07	6.56	16.21	18.08	0.40	17.68
Apr	106.28	2.06	0.00	2.06	104.22	42.63	0.49	0.00	0.00	0.49	45.03	25.42	6.61	16.13	17.71	0.80	16.91
May	105.74	2.20	0.00	2.20	103.54	42.78	0.69	0.00	0.00	0.69	46.03	25.50	7.89	15.16	17.98	0.80	17.18
Jun	106.70	2.60	0.00	2.60	104.10	42.16	0.94	0.00	0.00	0.94	47.03	24.55	8.25	16.21	18.11	0.90	17.21
Jul	110.64	3.11	0.00	3.11	107.53	47.89	0.92	0.00	0.00	0.92	45.80	24.34	8.22	14.99	18.80	0.70	18.10
Aug	110.64	2.19	0.00	2.19	108.45	48.94	0.40	0.00	0.00	0.40	48.07	25.19	7.91	16.05	19.10	0.70	18.40
Sep	109.22	2.00	0.00	2.00	107.22	48.03	0.73	0.00	0.00	0.73	47.38	25.27	8.33	15.63	18.90	0.60	18.30
Oct																	
Nov																	
Dec																	
Average	106.18	1.67	0.00	1.67	104.51	44.69	0.52	0.00	0.00	0.52	44.58	25.01	7.22	16.09	18.29	0.59	17.70
YTD total	955.60	15.05	0.00	15.05	940.56	402.20	4.70	0.00	0.00	4.70	401.26	225.13	64.99	144.79	164.64	5.30	159.34

Net to LV Wash is calculated as Influent minus Total Reuse

Las Vegas Wash and Colorado River Dischargers (2022)

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	185.44	6.84	179.32	1.45	0.18	1.28	17,181.00
Feb	186.63	5.66	181.55	1.52	0.17	1.35	16,277.77
Mar	189.32	7.45	182.12	1.65	0.20	1.45	16,337.05
Apr	192.04	9.96	182.29	1.65	0.23	1.42	16,349.68
May	192.00	11.58	181.91	1.80	0.19	1.62	16,333.31
Jun	191.52	12.69	184.55	1.70	0.26	1.44	16,553.13
Jul	201.67	12.95	186.42	1.98	0.22	1.76	16,747.50
Aug	203.87	11.21	190.97	1.78	0.19	1.60	17,137.85
Sep	201.42	11.66	188.53	1.74	0.16	1.58	16,919.54
Oct							
Nov							
Dec							
Annual Avg	194.17	10.00	182.88	1.70	0.19	1.51	148800.63

Water Production (2022)

(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	4	20,323	20,327	3,919	1,016	4,935	0	3,915	3,915	98	315	413	2.79	66	69	7	28,636
Feb	1	18,956	18,957	3,698	981	4,680	0	3,649	3,649	122	320	442	2.72	65	68	4	26,810
Mar	2	24,919	24,921	5,304	733	6,037	0	4,586	4,586	189	427	616	7.97	77	85	10	35,502
Apr	4,592	22,334	26,926	6,104	988	7,092	0	4,867	4,867	264	516	780	7.62	83	91	4,600	34,168
May	5,760	27,651	33,411	7,876	548	8,424	0	5,764	5,764	377	647	1,024	13.43	76	89	5,773	42,391
Jun	5,716	30,240	35,956	9,244	625	9,869	0	6,234	6,234	436	709	1,145	7.98	85	85	5,716	46,948
Jul	5,742	33,069	38,811	9,737	0	9,737	0	6,537	6,537	418	696	1,114	6.62	104	111	5,749	50,562
Aug	6,103	29,689	35,792	9,385	0	9,385	0	6,020	6,020	307	622	929	9.39	91	100	6,112	46,115
Sep	5,762	26,608	32,370	8,414	0	8,414	0	5,344	5,344	349	572	920	3.81	83,019	83,023	5,766	124,305
Oct			0			0			0			0			0	0	0
Nov			0			0			0			0			0	0	0
Dec			0			0			0			0			0	0	0
YTD	33,682	233,791	267,473	63,682	5,095	68,776	0	46,933	46,933	2,559	4,824	7,382	62	83,667	83,729	33,744	435,455

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		
	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
Jan	20,297	19,734	20,327	4,728	4,946	4,935	3,682	3,773	3,915	438	326	413	248	201	220	350	381	395	144	157	160
Feb	19,348	18,489	18,957	4,525	4,650	4,680	3,551	3,539	3,649	466	349	442	238	216	211	359	345	376	154	142	145
Mar	21,008	23,496	24,921	5,125	6,102	6,037	3,865	4,371	4,586	463	447	616	226	244	228	367	449	488	162	194	181
Apr	22,827	27,257	26,926	6,037	7,266	7,092	4,198	4,825	4,867	728	870	780	226	260	251	451	546	588	271	213	233
May	32,374	33,792	33,411	8,839	9,325	8,424	5,478	5,721	5,764	1,129	1,093	1,024	293	292	283	657	667	686	300	297	263
Jun	35,455	37,597	35,956	9,782	10,133	9,869	5,887	6,262	6,234	1,214	1,265	1,145	361	318	298	762	800	752	313	320	307
Jul	40,024	38,902	33,069	11,045	10,352	9,737	6,562	6,612	6,537	1,357	1,233	1,114	393	302	331	867	835	806	341	313	
Aug	40,043	39,072	29,689	10,990	10,295	9,385	6,695	6,569	6,020	1,357	1,242	929	388	311	307	863	848	727	379	306	
Sep	34,491	33,330	26,608	9,562	8,994	8,414	6,015	5,460	5,344	1,240	1,094	920	354	291	290	758	773	681	310	287	
Oct	30,141	28,794		8,368	7,501		5,375	5,107		1,052	815		316	260		675	617		259	226	
Nov	23,331	23,359		5,812	6,003		4,316	4,370		620	638		237	238		481	484		192	185	
Dec	20,579	20,561		5,318	5,256		3,902	4,019		502	453		229	220		421	393		166	143	
ANNUAL	339,918	344,383	233,791	90,131	90,823	68,776	59,525	60,627	46,934	10,567	10,266	7,382	3,508	3,152	2,419	7,009	7,137	5,500	2,991	2,783	1,289

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 **		
	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
Jan	0.69	0.67	0.67	0.50	0.48	0.49	0.45	0.45	0.44	0.26	0.25	0.26	0.67	0.70	0.63	0.62	0.60	0.60
Feb	0.65	0.64	0.65	0.47	0.45	0.45	0.43	0.43	0.42	0.22	0.22	0.22	0.70	0.60	0.62	0.59	0.58	0.58
Mar	0.63	0.58	0.56	0.44	0.40	0.40	0.43	0.39	0.38	0.25	0.18	0.18	0.65	0.62	0.69	0.57	0.52	0.50
Apr	0.52	0.49	0.51	0.37	0.33	0.33	0.37	0.34	0.34	0.15	0.13	0.13	0.59	0.60	0.61	0.47	0.44	0.45
May	0.39	0.42	0.42	0.27	0.26	0.29	0.30	0.29	0.30	0.11	0.11	0.10	0.61	0.58	0.61	0.35	0.37	0.38
Jun	0.37	0.37	0.38	0.23	0.24	0.23	0.28	0.27	0.27	0.09	0.09	0.09	0.58	0.54	0.53	0.33	0.33	0.33
Jul	0.35	0.38	0.39	0.22	0.25	0.24	0.27	0.27	0.27	0.09	0.09	0.10	0.58	0.67	0.57	0.31	0.34	0.34
Aug	0.35	0.38	0.42	0.22	0.25	0.26	0.27	0.27	0.30	0.10	0.09	0.12	0.56	0.55	0.55	0.31	0.34	0.37
Sep	0.39	0.42	0.45	0.24	0.27	0.28	0.29	0.31	0.33	0.10	0.10	0.11	0.57	0.53	0.55	0.34	0.38	0.40
Oct	0.46	0.49		0.28	0.34		0.33	0.34		0.12	0.13		0.62	0.59		0.40	0.44	
Nov	0.56	0.58		0.38	0.40		0.39	0.38		0.18	0.17		0.67	0.53		0.50	0.51	
Dec	0.64	0.67		0.43	0.47		0.44	0.43		0.23	0.24		0.63	0.64		0.57	0.60	
AVG.	0.47	0.48	0.47	0.31	0.32	0.30	0.34	0.34	0.33	0.13	0.13	0.13	0.62	0.59	0.59	0.42	0.43	0.42

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	20,327	13,529	4,935	2,400	3,915	1,712	413	107	220	138	29,810	17,887
Feb	18,957	12,383	4,680	2,110	3,649	1,543	442	98	211	131	27,938	16,265
Mar	24,921	13,906	6,037	2,385	4,586	1,720	616	110	228	157	36,389	18,277
Apr	26,926	13,710	7,092	2,340	4,867	1,631	780	102	251	152	39,916	17,935
May	33,411	14,130	8,424	2,426	5,764	1,711	1,024	107	283	172	48,906	18,545
Jun	35,956	13,705	9,869	2,260	6,234	1,667	1,145	104	298	157	53,502	17,893
Jul	38,811	15,012	9,737	2,316	6,537	1,789	1,114	110	331	188	56,531	19,414
Aug	35,792	15,111	9,385	2,396	6,020	1,817	929	110	307	170	52,434	19,604
Sep	32,370	14,408	8,414	2,327	5,344	1,740	920	100	290	160	47,338	18,735
Oct	0	0	0	0	0	0	0	0	0	0	0	0
Nov	0	0	0	0	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	0	0	0	0	0	0	0
YTD	267,473	125,895	68,776	20,961	46,933	15,330	7,382	948	2,419	1,424	392,984	164,557

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			
Aug				54			
Sep				307			
Oct							
Nov							
Dec							
Total 2022	0	0	0	361	0	0	0
Total 2021	0	0	0	688	0	0	0
Total 2020	0	0	0	672	0	0	0

* Data provided by SNWA