

Guests Present

Elise Nguyen	Clark County
Daylin Sigler	Clark County
Charles Ocansey	CCWRD
Paul Parasugo	CCWRD
Thoman Minwegen	CCWRD
Matt Thomas	Henderson

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 9:02 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 2, 2022

Charles Trushel moved and John Bettencourt seconded to accept the November 2, 2022 minutes. The motion was unanimously approved.

4. APPROVAL OF AGENDA

Dan Fischer noted the presentation title needs to be corrected to: "Water Reuse in the Las Vegas Valley." Todd Tietjen moved and Brian Carlson seconded to approve the agenda. The motion was unanimously approved.

5. PRESENTATION: WATER REUSE IN THE LAS VEGAS VALLEY

6. DISCUSSION OF QUARTERLY FLOW REPORT

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

- City of Henderson averages 6.5 MGD of direct non-potable reuse. The remaining entities average 1.5 MGD.
- SNWA is beginning to recover some of the banked groundwater and use it for groundwater recharge.

7. MEMBER UPDATES

A. Moapa Valley Water District

- N/A

B. Las Vegas Valley Water District

- Snowpack in the Rockies is above average which could help water levels in Lake Mead.
- Working with biologists from the City of Las Vegas to conduct sampling in Las Vegas Bay as the nearby treatment plant is undergoing repairs. Samples did not detect any phosphorous or algae problems.
- Federal funding is paying for the construction projects in the Lower Las Vegas Wash.
- Coordinating with NDEP on the permit details for the Lower Las Vegas Wash projects.
- Transitioning to the Long-Term Operating Plan now that construction is complete in the Upper Wash.
- SNWA and the cities of Henderson and Las Vegas are collecting phosphate samples to monitor the construction activities in the Las Vegas Wash.

C. Boulder City

- Following a presentation from the Southern Nevada Water Authority on direct reuse in January, the Utility Advisory Committee met to discuss options for either directly reusing or returning the effluent to the collections system via existing infrastructure and into injection wells.
- Many residents are installing smart irrigation controllers which are very affordable because of the SNWA rebate.

D. Virgin Valley Water District

- N/A

E. City of Mesquite

- N/A

F. City of Las Vegas

- O&M Updates:
 - Started using thickener fermentation system to help generate VFAs for B&R facilities.
 - Awaiting results from NDEP's annual site inspection.
 - Collecting water quality samples in Las Vegas Wash as repairs are being made to the filtration facility. Estimate the facility will be back online in mid-February.
 - Beginning the design process for headworks rehabilitation project.
 - Dewatering facility is in design. Project is anticipated to start later this year.
 - Project to replace the process air blowers at the B&R facility is delayed by 10 months because of delays in getting electrical equipment.
- CIP Updates:
 - Nothing to report.

G. Clark County Water Reclamation District

- Collection System Updates:
 - Construction material cost increases and supply chain issues are delaying scheduled construction projects.
 - The pilot project to evaluate Vaughan Chopper Pumps was highly successful. The pumps have not clogged in 12 months.
 - The results from NDEP's 2022 review of the sanitary sewer collection system operation and maintenance were "no findings, no recommendations."
- The Flamingo Plant Updates:
 - Expansion is on-going.
 - New primary and headworks are under construction.
 - Three new biological nutrient removal trains are under construction.
 - Construction of new sludge thickeners is on-going. The new thickeners will produce VFAs.
 - Demolishing old facilities is on-going.

H. City of North Las Vegas

- Sludge conveyance project is complete, and the units are now online.
- The membrane tanks recoat project is complete.
- The flow equalization basin project is on-going.
- Began work on septic dump station at the headworks facility.

I. City of Henderson

- Replaced membrane in three trains at the SWRF in November.
- Total Coliform was elevated for a period of time. Took additional treatment measures and the trends are improving.
- Phase 4 expansion is at 60% design.
- Took the east BNR basin offline for repairs.
- EPA Region 9 conducted a review of the pretreatment compliance program in Fall 2022. The program results were “exemplary” and had no major findings.

J. Clark County

- New MS4 Permit – NDEP received comments from EPA on the MS4 permit. Stormwater regulatory program assessments are being performed on all MS4 co-permittees.
- Selenium – The approved selenium legislation was sent to EPA for final approval.
- Draft Construction General Permit – Requested meeting with NDEP to discuss concerns with permit requirements.
- Grants – NDEP awarded the 604(b) grant, a grant associated with the 208 Area-Wide Water Quality Management Plan. Total grant funding is \$60,000, which includes additional Bipartisan Infrastructure Law funding.

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 May 3, 2023 at 9:00 am. A meeting invite will be sent out.

11. ADJOURNMENT

The meeting was adjourned at 10:43 am.

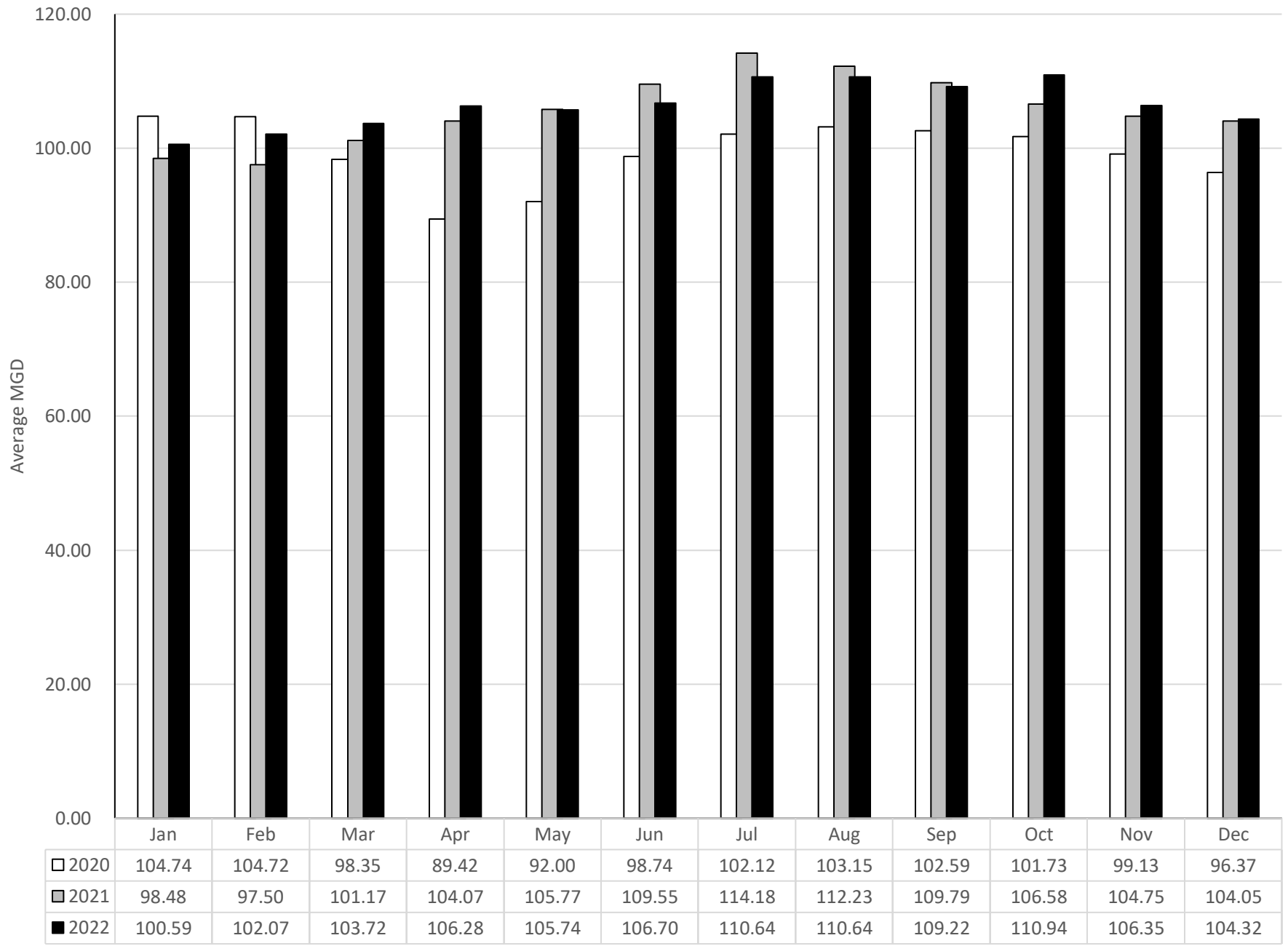
2022
4th Quarter Flow Report
For
Clark County Sewage
And
Wastewater Advisory
Committee
(SWAC)

February 1, 2023

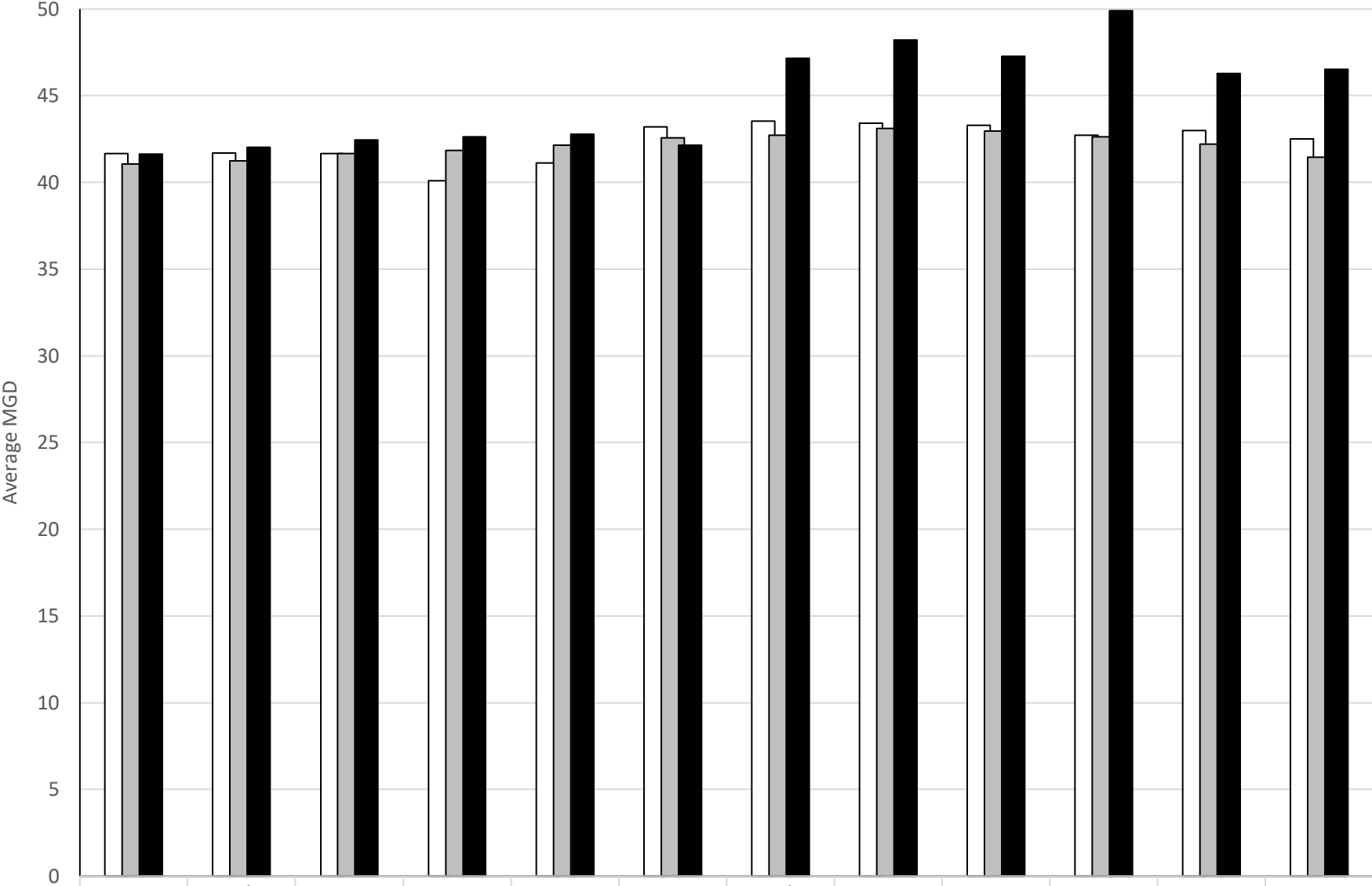
Wastewater Flows

2020 through 2022

Clark County Water Reclamation District Wastewater Flows

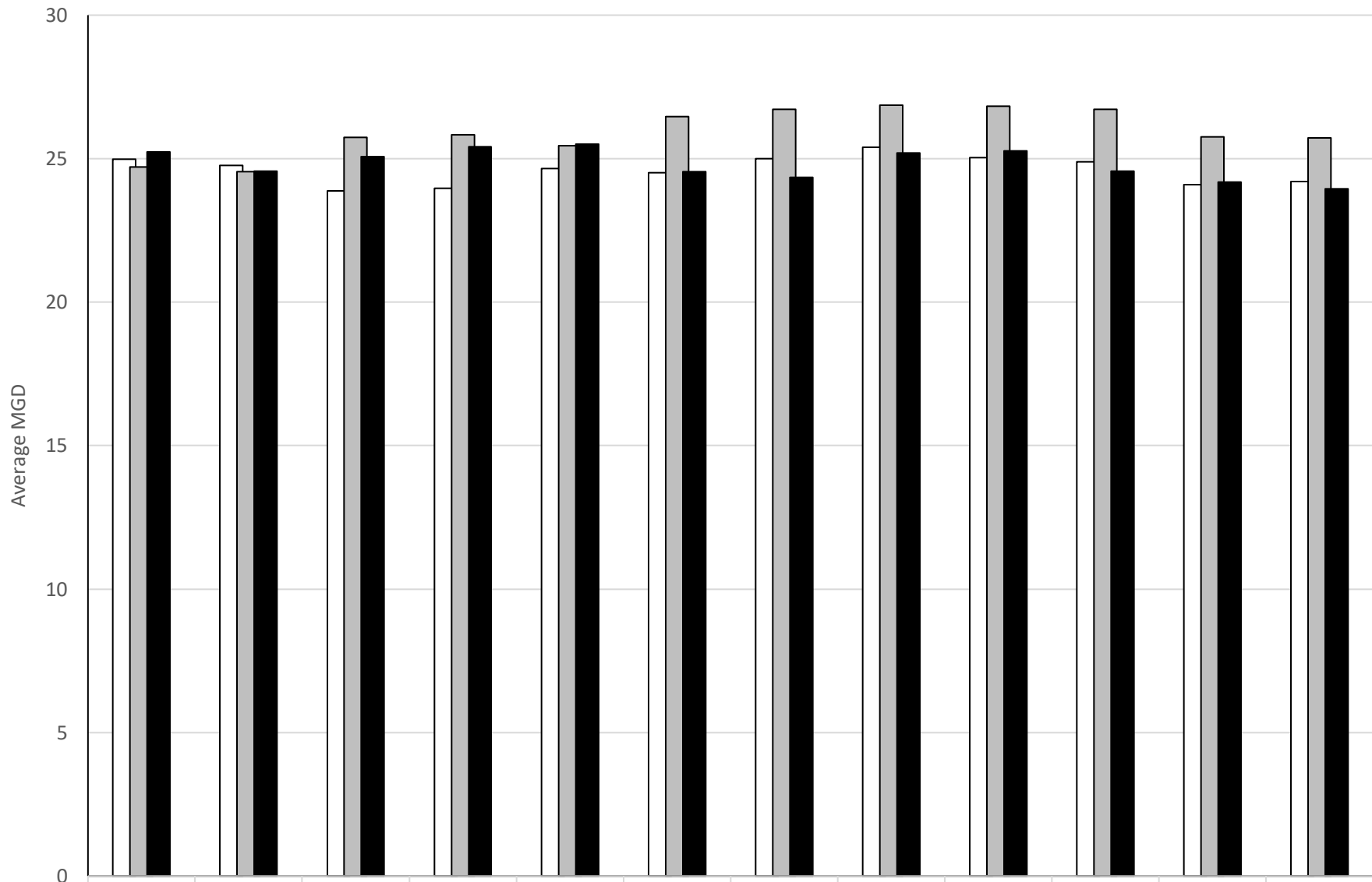


City of Las Vegas Wastewater Flows



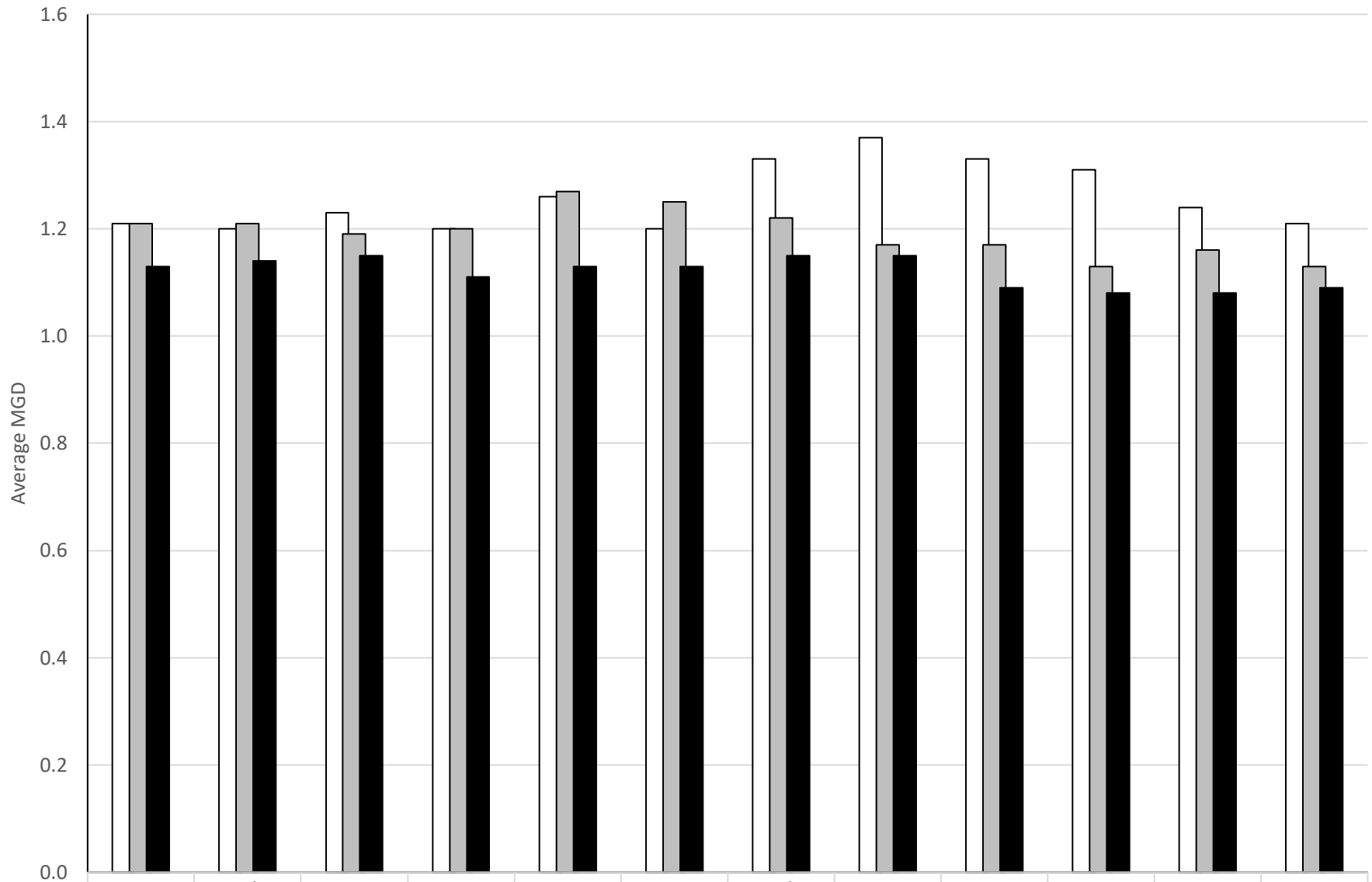
2020	41.67	41.68	41.67	40.09	41.13	43.20	43.52	43.41	43.28	42.73	42.99	42.52
2021	41.06	41.23	41.67	41.84	42.14	42.58	42.71	43.10	42.95	42.63	42.22	41.46
2022	41.62	42.04	42.45	42.63	42.78	42.16	47.16	48.20	47.28	49.90	46.27	46.53

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	24.56	24.18	23.94

Boulder City Wastewater Flows



□ 2020

■ 2021

■ 2022

Jan

Feb

Mar

Apr

May

Jun

Jul

Aug

Sep

Oct

Nov

Dec

1.21

1.20

1.23

1.20

1.26

1.20

1.33

1.37

1.33

1.31

1.24

1.21

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1.25

1.22

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1.11

1.13

1.13

1.15

1.15

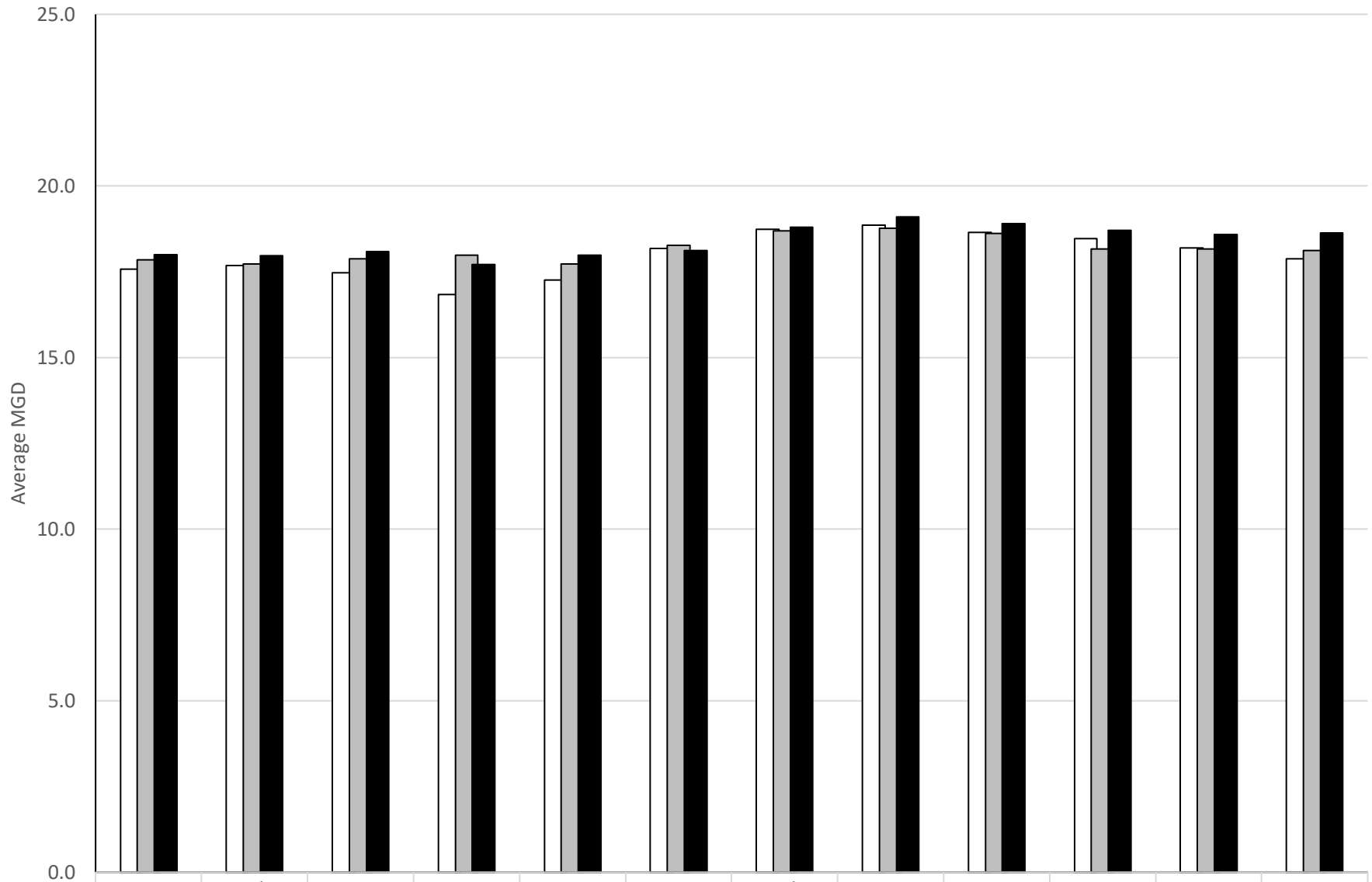
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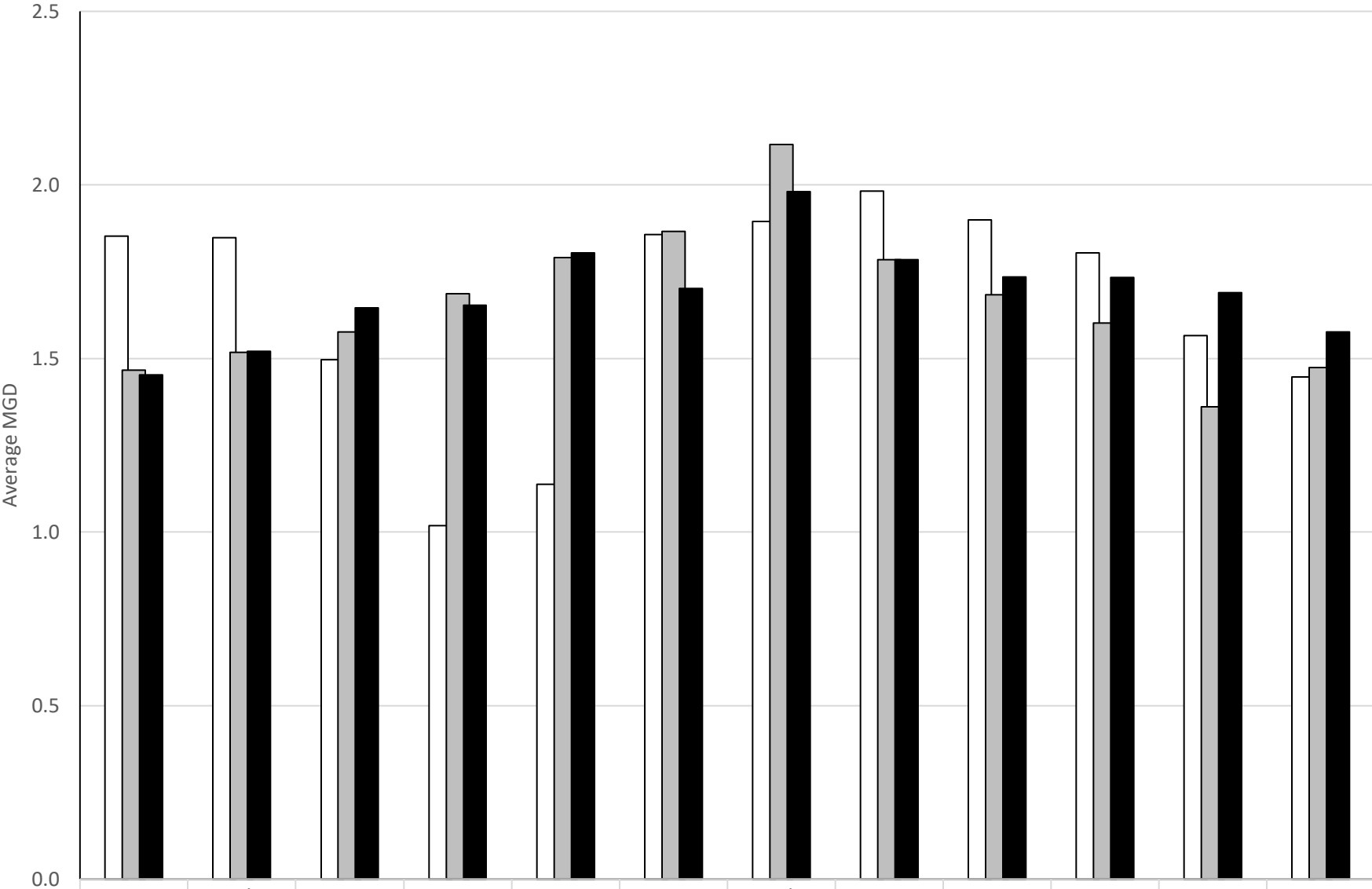
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City of North Las Vegas Wastewater Flows



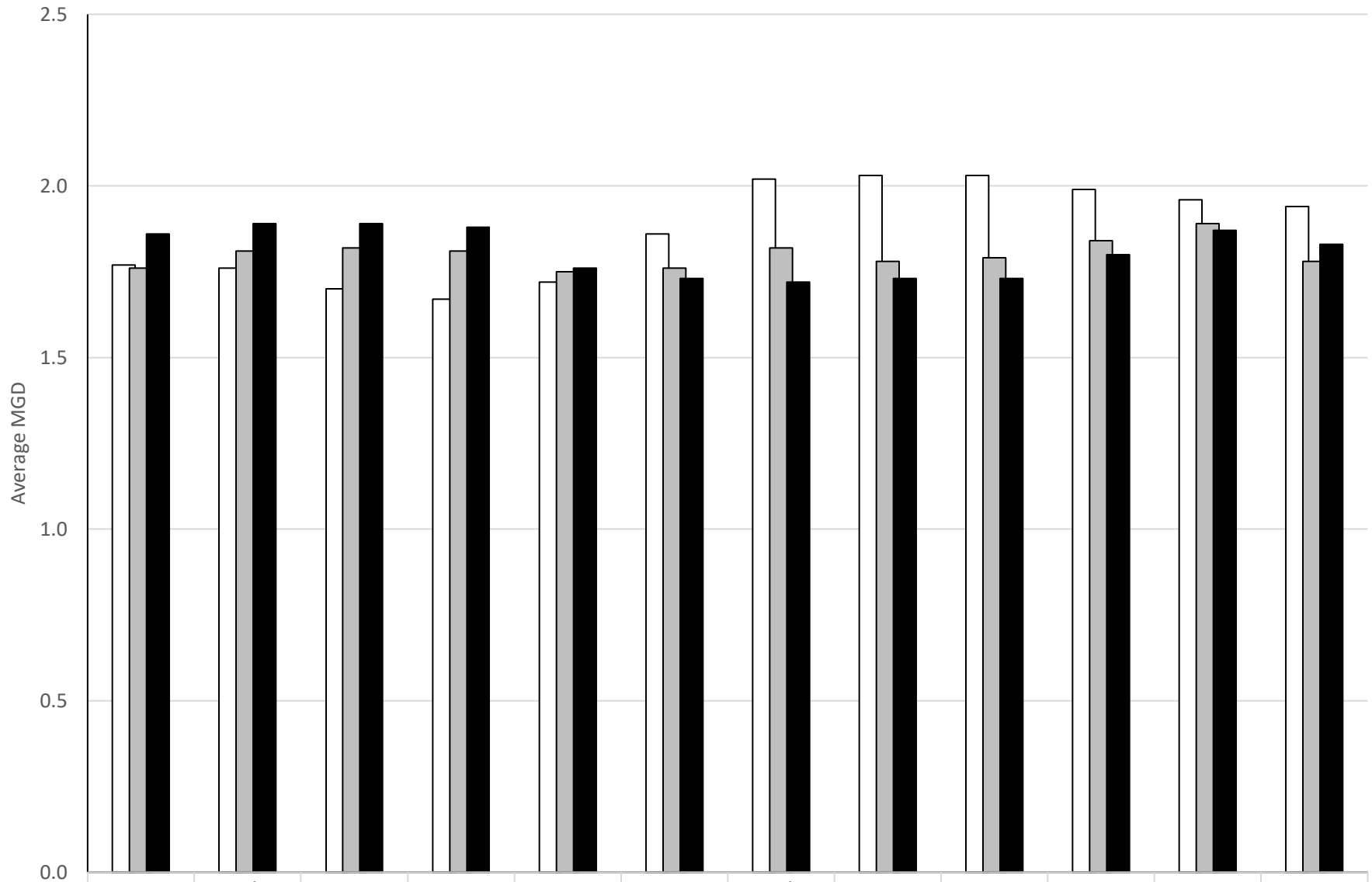
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	17.58	17.68	17.47	16.84	17.26	18.18	18.74	18.86	18.65	18.46	18.19	17.87
2021	17.84	17.73	17.87	17.98	17.72	18.27	18.69	18.76	18.62	18.17	18.17	18.12
2022	18.00	17.96	18.08	17.71	17.98	18.11	18.80	19.10	18.90	18.71	18.58	18.63

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	1.73	1.69	1.58

City of Mesquite Wastewater Flows



□ 2020

■ 2021

■ 2022

Jan

Feb

Mar

Apr

May

Jun

Jul

Aug

Sep

Oct

Nov

Dec

1.77

1.76

1.70

1.67

1.72

1.86

2.02

2.03

2.03

1.99

1.96

1.94

1.76

1.81

1.82

1.81

1.75

1.76

1.82

1.78

1.79

1.84

1.89

1.78

1.86

1.89

1.89

1.88

1.76

1.73

1.72

1.73

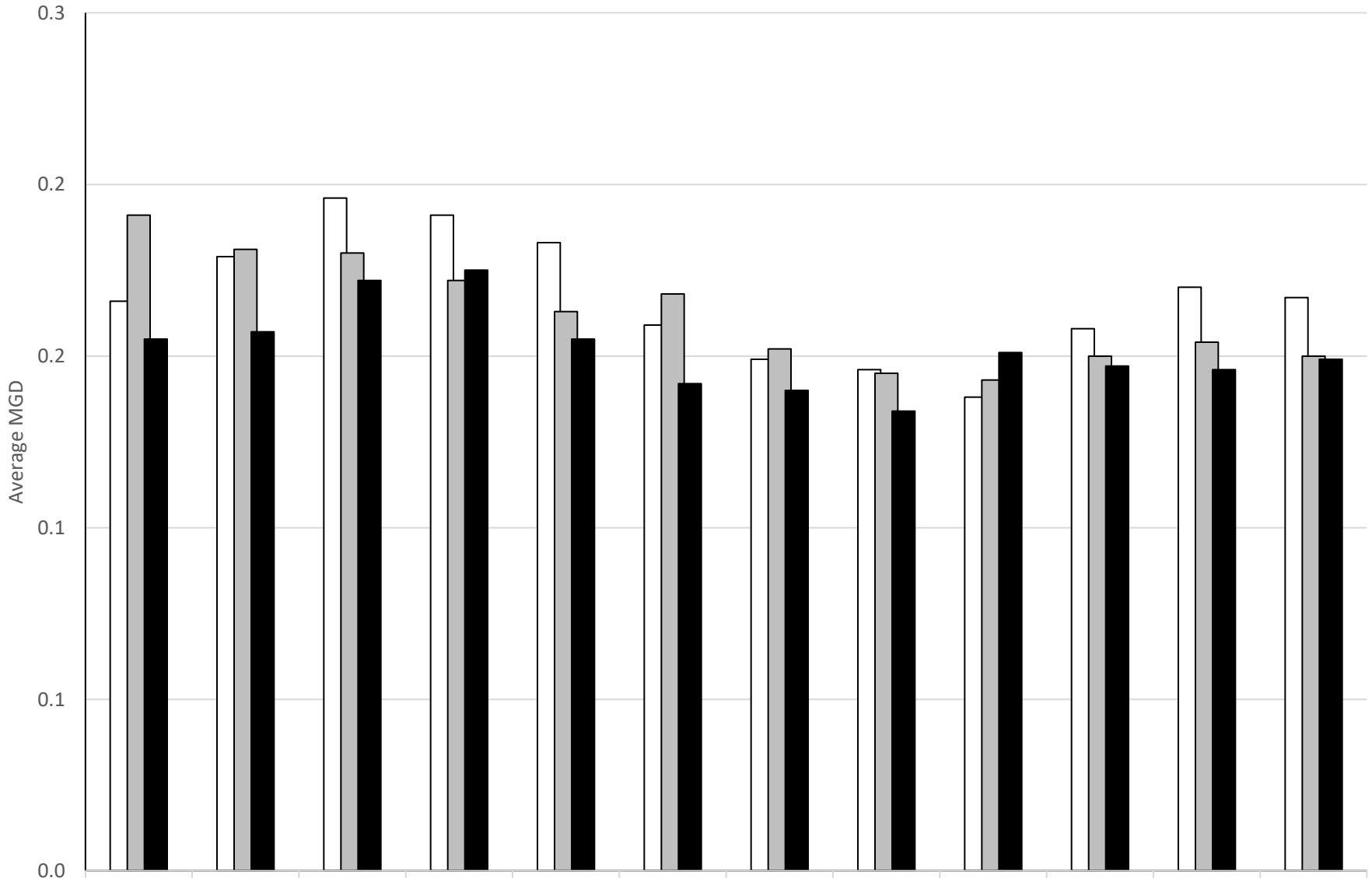
1.73

1.80

1.87

1.83

Moapa Wastewater Flows

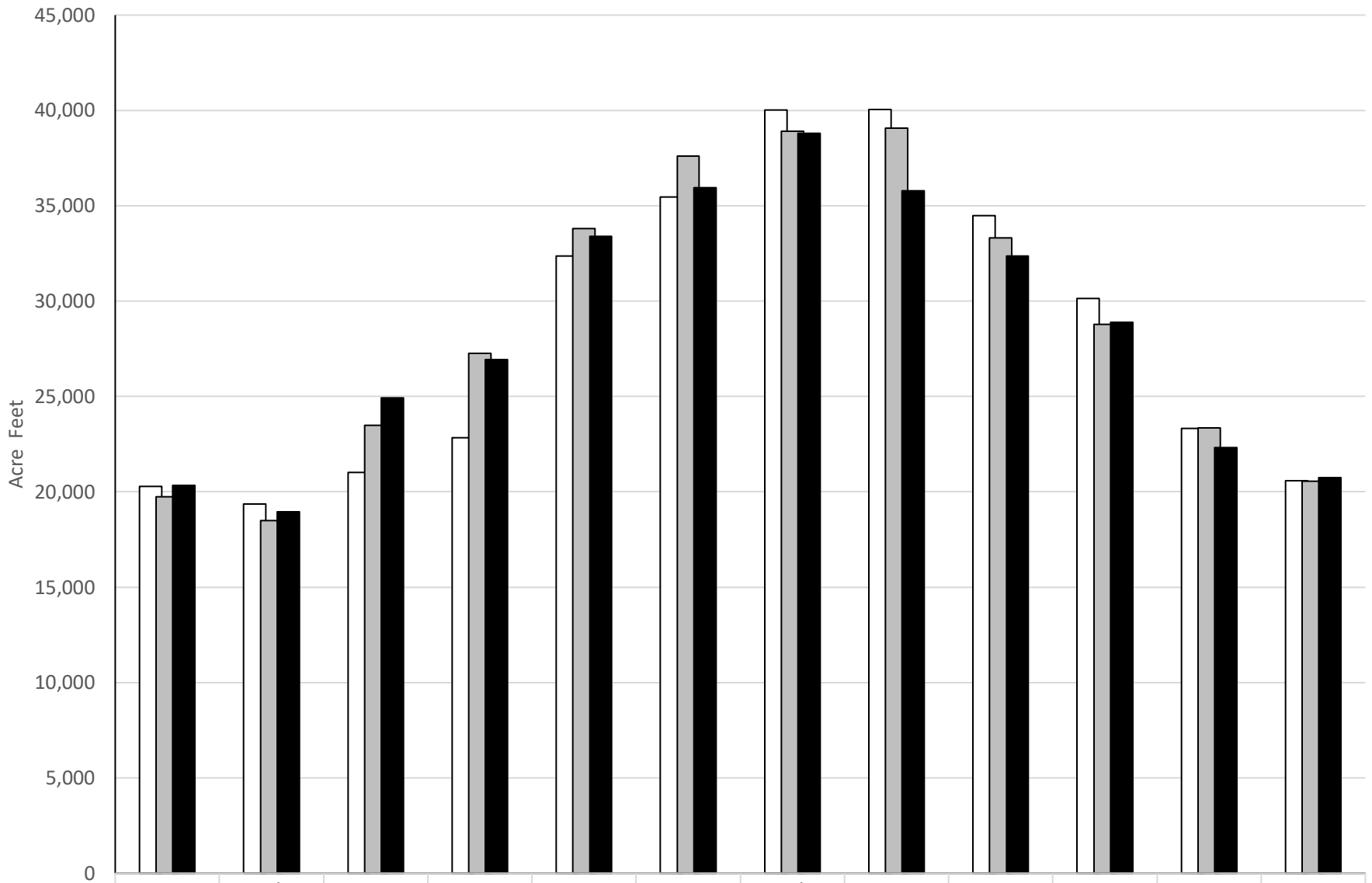


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	0.166	0.179	0.196	0.191	0.183	0.159	0.149	0.146	0.138	0.158	0.170	0.167
2021	0.191	0.181	0.180	0.172	0.163	0.168	0.152	0.145	0.143	0.150	0.154	0.150
2022	0.155	0.157	0.172	0.175	0.155	0.142	0.140	0.134	0.151	0.147	0.146	0.149

Water Production

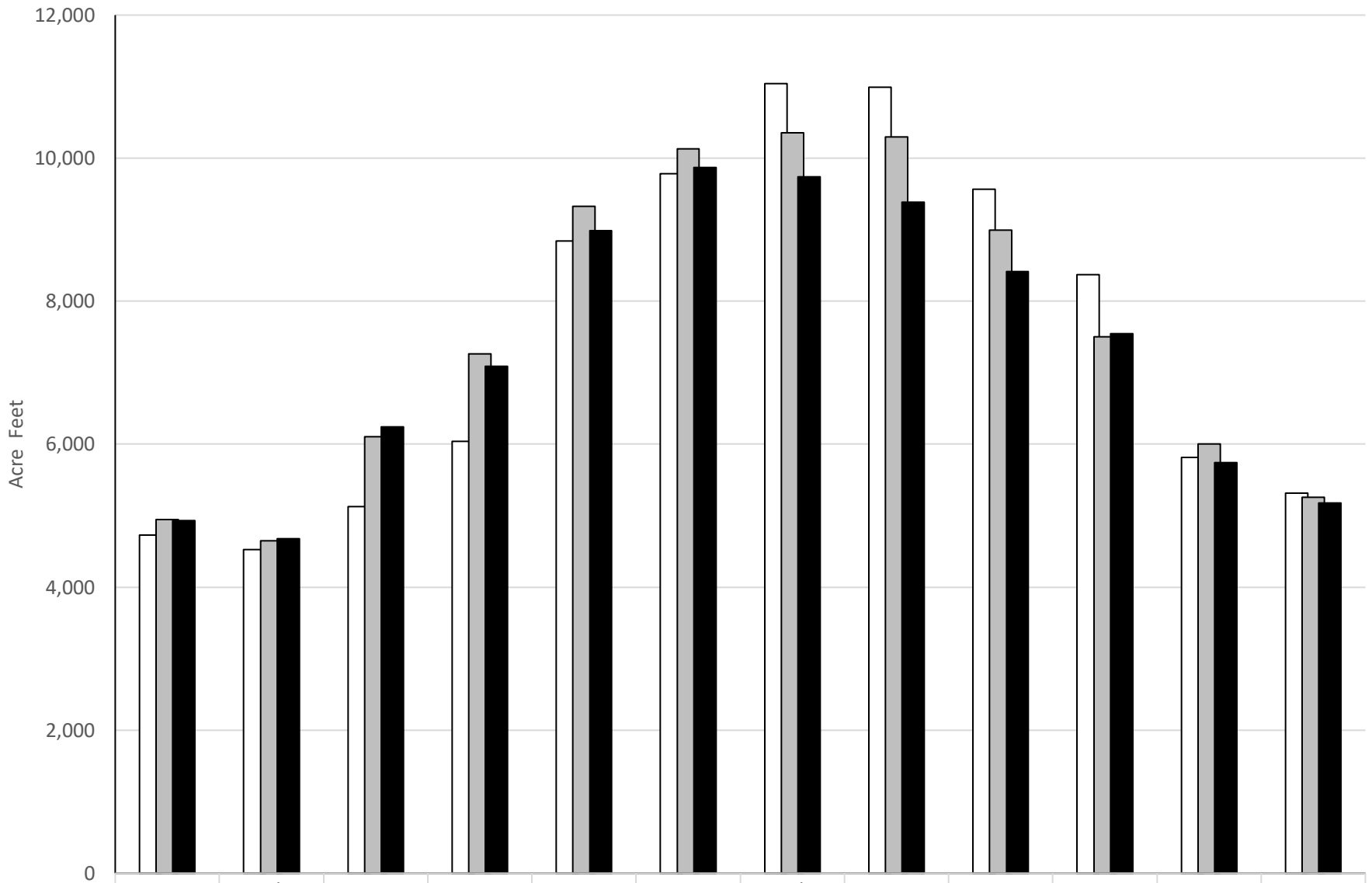
2020 through 2022

Las Vegas Valley Water District Water Production



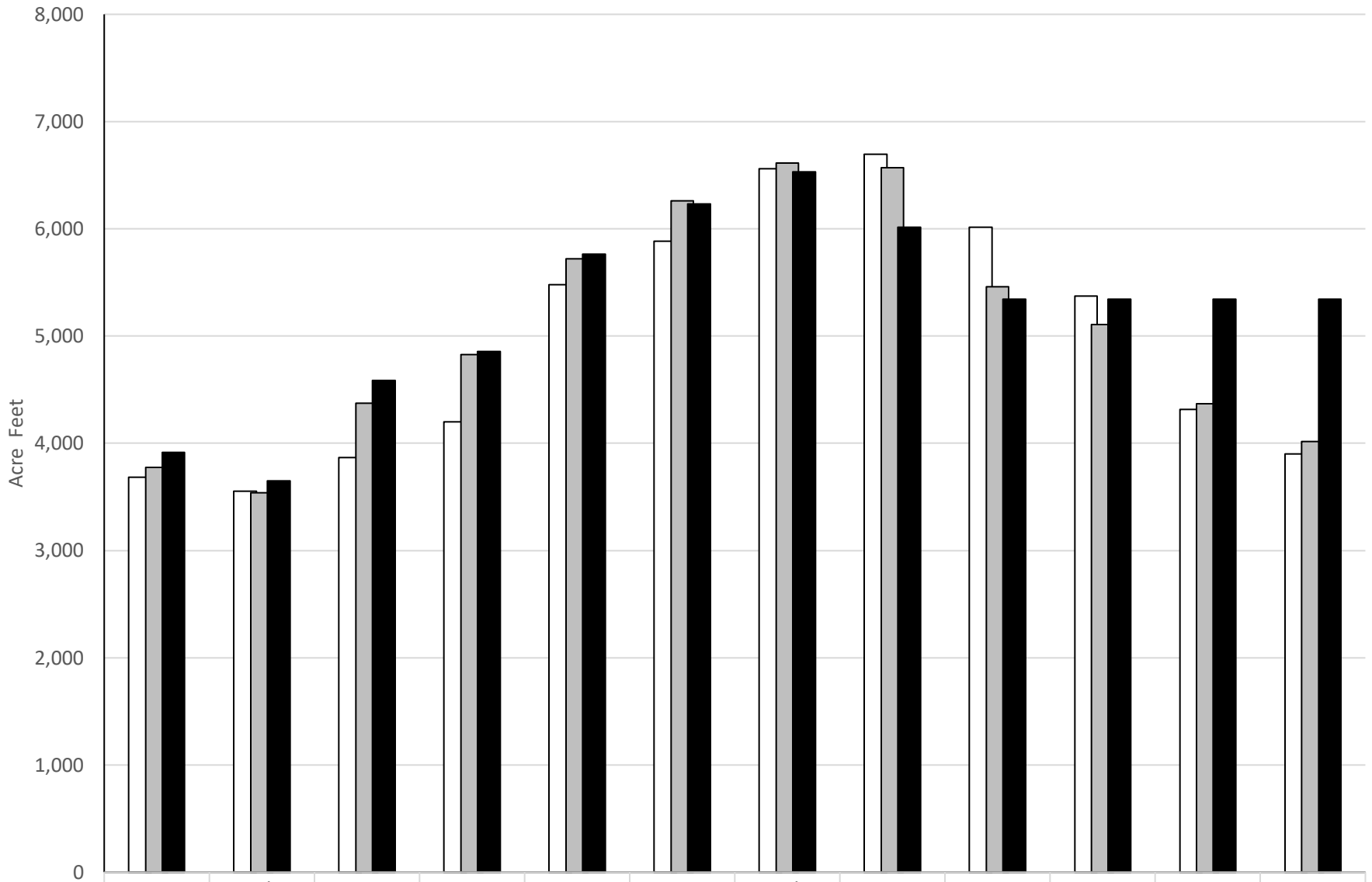
2020	20,297	19,348	21,008	22,827	32,374	35,455	40,024	40,043	34,491	30,141	23,331	20,579
2021	19,734	18,489	23,496	27,257	33,792	37,597	38,902	39,072	33,330	28,794	23,359	20,561
2022	20,327	18,957	24,921	26,926	33,411	35,956	38,811	35,792	32,370	28,890	22,309	20,741

City of Henderson Water Production



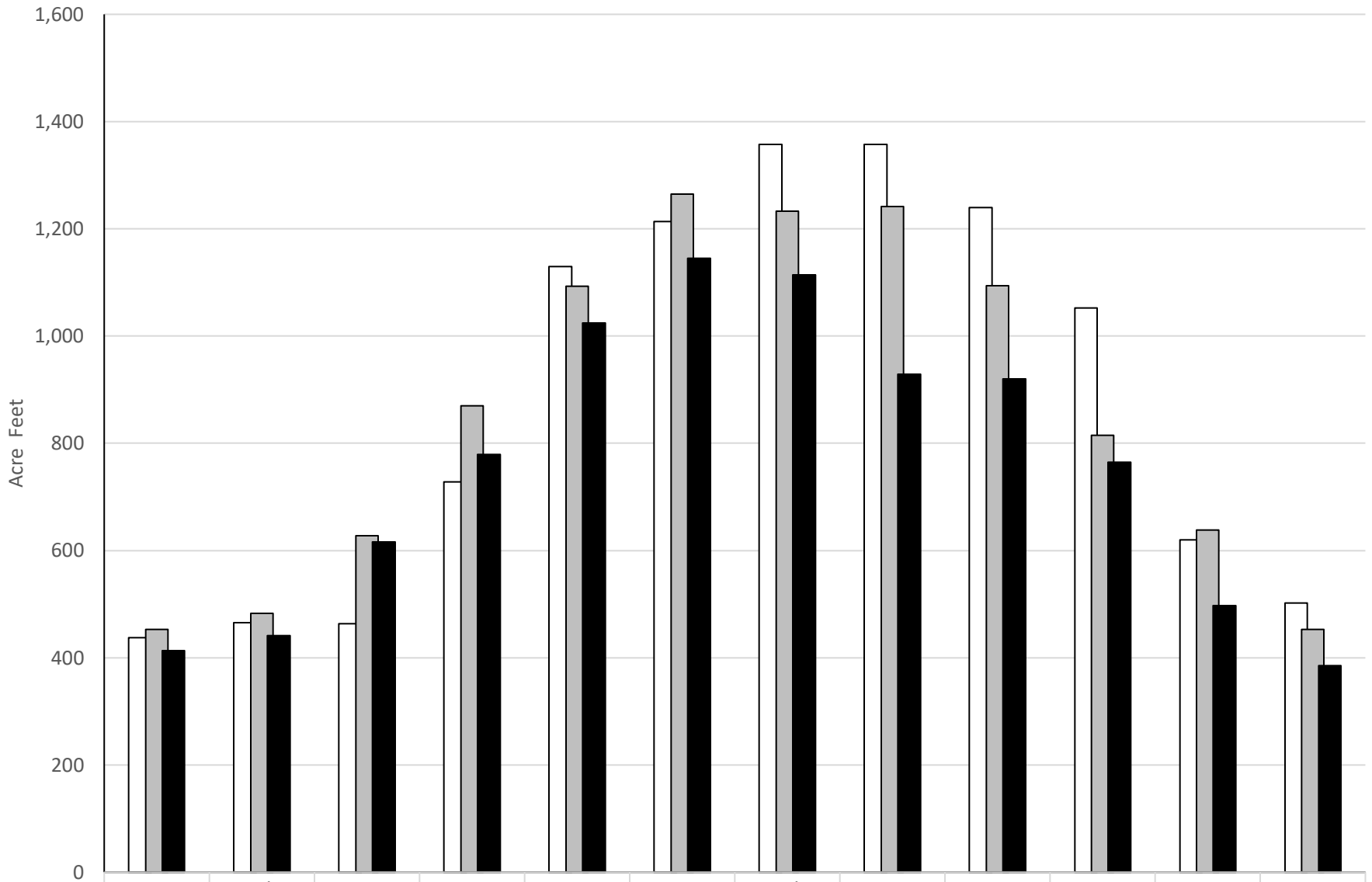
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	4,728	4,525	5,125	6,037	8,839	9,782	11,045	10,990	9,562	8,368	5,812	5,318
2021	4,946	4,650	6,102	7,266	9,325	10,133	10,352	10,295	8,994	7,501	6,003	5,256
2022	4,935	4,680	6,240	7,092	8,986	9,869	9,737	9,385	8,414	7,545	5,741	5,174

City of North Las Vegas Water Production



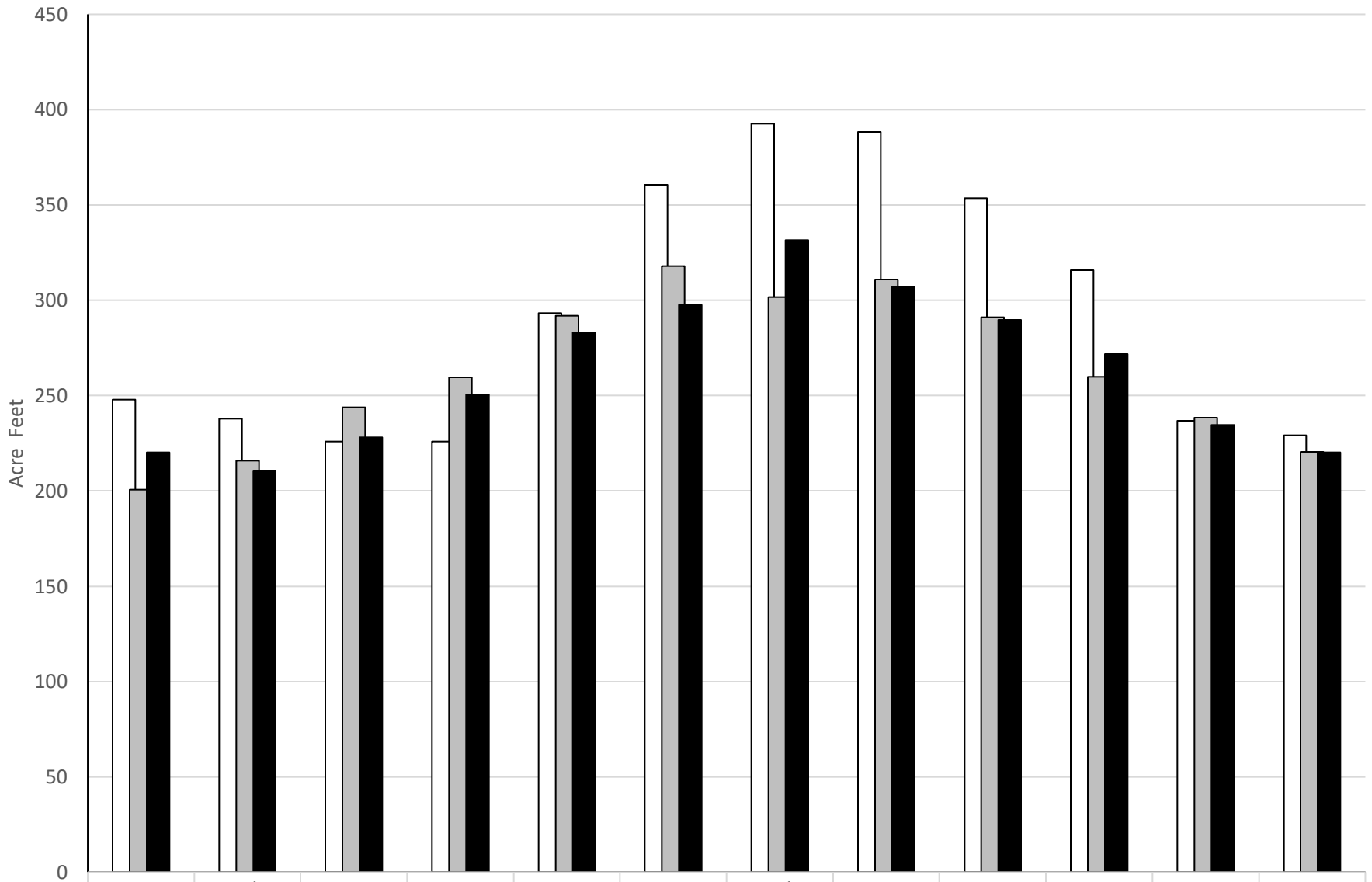
2020	3,682	3,551	3,865	4,198	5,478	5,887	6,562	6,695	6,015	5,375	4,316	3,902
2021	3,773	3,539	4,371	4,825	5,721	6,262	6,612	6,569	5,460	5,107	4,370	4,019
2022	3,915	3,649	4,586	4,856	5,764	6,234	6,532	6,015	5,344	5,344	5,344	5,344

Boulder City Water Production



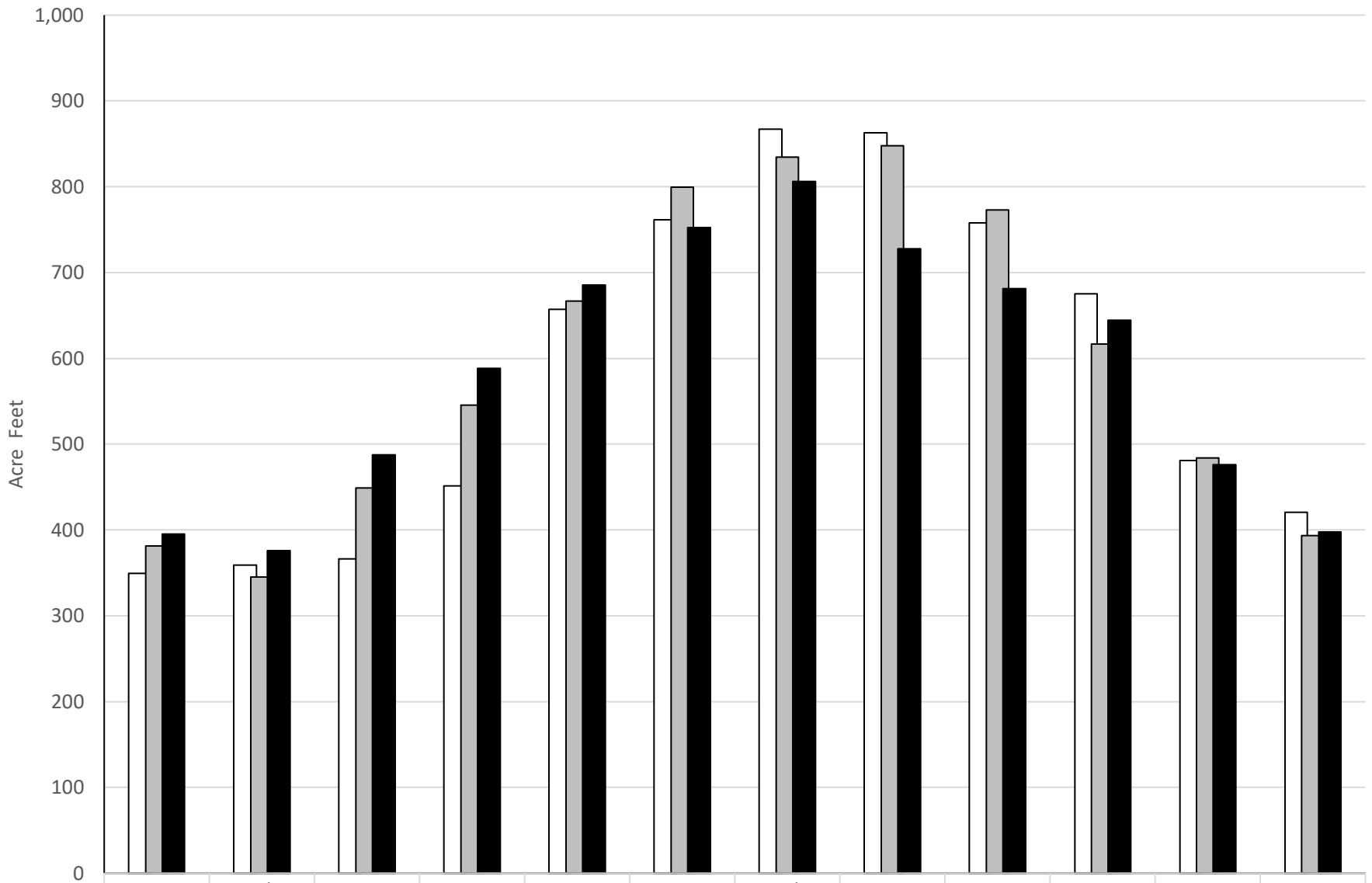
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	438	466	463	728	1,129	1,214	1,357	1,357	1,240	1,052	620	502
2021	453	483	628	870	1,093	1,265	1,233	1,242	1,094	815	638	453
2022	413	442	616	780	1,024	1,145	1,114	929	920	765	497	385

Big Bend Water District Water Production



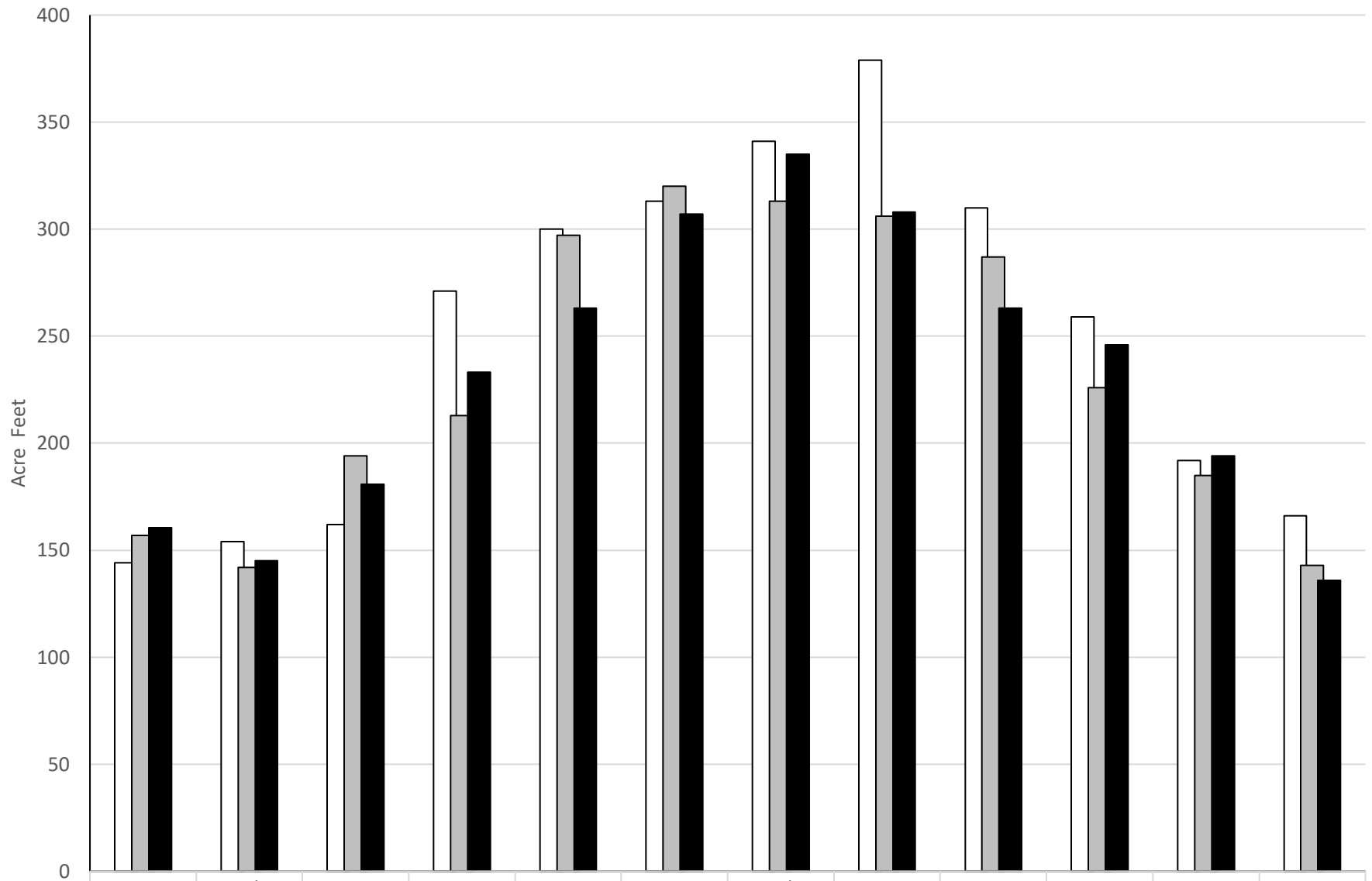
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	248	238	226	226	293	361	393	388	354	316	237	229
2021	201	216	244	260	292	318	302	311	291	260	238	220
2022	220	211	228	251	283	298	331	307	290	272	235	220

Virgin Valley Water District Water Production



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	644	476	398

Moapa Valley Water District Water Production



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	335	308	263	246	194	136

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	110.64	0.018	0.018	47.16	18.74	18.69	18.80	25.00	26.71	24.34	1.33	1.22	1.15
Aug	103.15	112.23	110.64	0.016	0.015	48.20	18.86	18.76	19.10	25.40	26.87	25.19	1.37	1.17	1.15
Sep	102.59	109.79	109.22	0.017	0.018	47.28	18.65	18.62	18.90	25.03	26.83	25.27	1.33	1.17	1.09
Oct	101.73	106.58	110.94	42.73	42.63	49.90	18.46	18.17	18.71	24.89	26.71	24.56	1.31	1.13	1.08
Nov	99.13	104.75	106.35	42.99	42.22	46.27	18.19	18.17	18.58	24.10	25.76	24.18	1.24	1.16	1.08
Dec	96.37	104.05	104.32	42.52	41.46	46.53	17.87	18.12	18.63	24.21	25.73	23.94	1.21	1.13	1.09
ANNUAL	99.42	105.68	106.43	42.32	42.13	44.92	17.98	18.16	18.38	24.62	25.95	24.82	1.26	1.19	1.12

* Includes estimated .5 MGD NLV

Historic Trends Influent Wastewater Flows

	Searchlight			Blue Diamond			MVWRC			Laughlin			Mesquite			Indian Springs		
Month	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	0.048	0.018	0.018	0.011	0.149	0.152	0.140	1.90	2.12	1.98	2.02	1.82	1.72	0.117	0.092	0.101
Aug	0.034	0.041	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	0.115	0.098	0.104
Sep	0.033	0.030	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	0.109	0.104	0.101
Oct	0.029	0.033	0.039	0.018	0.017	0.012	0.158	0.150	0.147	1.80	1.60	1.73	1.99	1.84	1.80	0.111	0.095	0.094
Nov	0.028	0.046	0.039	0.015	0.018	0.016	0.170	0.154	0.146	1.57	1.36	1.69	1.96	1.89	1.87	0.096	0.085	0.094
Dec	0.028	0.040	0.039	0.018	0.021	0.012	0.167	0.150	0.149	1.45	1.47	1.58	1.94	1.78	1.83	0.101	0.092	0.120
ANNUAL	0.032	0.060	0.042	0.017	0.018	0.014	0.165	0.167	0.152	1.65	1.66	1.69	1.87	1.80	1.81	0.113	0.086	0.099

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	0.14	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	1.08	0.19	33.50	5.89
Nov	1.08	0.20	32.40	6.00
Dec	1.09	0.21	33.80	6.51
Annual	1.12	0.19	408.60	68.34

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	0.24	0.00	0.24	100.35	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	0.31	0.00	0.31	101.76	42.04	0.22	0.00	0.00	0.22	44.02	24.56	4.94	17.60	17.96	0.20	17.76
Mar	103.72	0.34	0.00	0.34	103.38	42.45	0.47	0.00	0.00	0.47	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	43.16	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	0.68	0.00	0.00	0.68	42.87	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	0.91	0.00	0.00	0.91	41.98	24.55	8.25	16.21	18.11	0.90	17.21
Jul	110.64	3.11	0.00	3.11	107.53	47.16	0.83	0.00	0.00	0.83	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	48.20	0.39	0.00	0.00	0.39	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	47.28	0.73	0.00	0.00	0.73	47.38	25.27	8.33	15.63	18.90	0.60	18.30
Oct	110.94	1.10	0.00	1.10	109.84	46.90	0.54	0.00	0.00	0.54	47.42	24.56	6.36	17.17	18.71	0.40	18.31
Nov	106.35	0.41	0.00	0.41	105.94	46.27	0.30	0.00	0.00	0.30	47.32	24.18	4.11	19.53	18.58	0.12	18.46
Dec	104.32	0.90	0.00	0.90	103.42	46.53	0.16	0.00	0.00	0.16	47.74	23.94	3.39	19.59	18.63	0.04	18.59
Average	106.43	1.45	0.00	1.45	104.98	44.67	0.49	0.00	0.00	0.49	45.31	24.82	6.57	16.76	18.38	0.49	17.89
YTD total	1277.21	17.46	0.00	17.46	1259.76	536.02	5.84	0.00	0.00	5.84	543.74	297.81	78.85	201.08	220.56	5.86	214.70

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	6.85	178.91	1.45	0.18	1.28	17,142.37
Feb	186.63	5.68	181.14	1.52	0.17	1.35	16,240.75
Mar	189.32	7.76	181.30	1.65	0.20	1.45	16,264.60
Apr	192.04	9.96	180.42	1.65	0.23	1.42	16,183.26
May	192.00	11.57	178.75	1.80	0.19	1.62	16,052.08
Jun	191.52	12.66	179.50	1.70	0.16	1.54	16,112.68
Jul	200.94	12.86	186.42	1.98	0.22	1.76	16,747.50
Aug	203.13	11.19	190.97	1.78	0.19	1.60	17,137.85
Sep	200.67	11.66	188.53	1.74	0.16	1.58	16,919.54
Oct	201.11	8.40	192.74	1.73	(0.85)	2.58	17,382.95
Nov	195.38	4.93	191.25	1.69	(1.89)	3.58	17,339.78
Dec	193.42	4.49	189.34	1.58	(3.00)	4.58	17,258.17
Annual Avg	194.30	9.00	184.94	1.69	-0.34	2.03	200781.54

Water Production (2021)

(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	936	6,240	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	4,856	4,856	264	516	780	7.62	83	91	4,600	34,157
May	5,760	27,651	33,411	7,876	1,110	8,986	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	93	5,724	46,948
Jul	5,742	33,069	38,811	9,737	0	9,737	0	6,532	6,532	418	696	1,114	6.62	104	111	5,749	50,557
Aug	6,103	29,689	35,792	9,385	0	9,385	0	6,015	6,015	307	622	929	9.39	91	100	6,112	46,109
Sep	5,762	26,608	32,370	8,414	0	8,414	0	5,339	5,339	349	572	920	3.81	83	87	5,766	41,364
Oct	5,895	22,995	28,890	7,545	0	7,545	0	4,981	4,981	274	491	765	7.22	81	89	5,902	36,368
Nov	4,404	17,905	22,309	5,741	0	5,741	0	4,184	4,184	140	357	497	7.91	73	81	4,412	28,400
Dec	1,677	19,064	20,741	5,174	0	5,174	0	3,950	3,950	95	290	385	5.40	62	67	1,682	28,635
YTD	45,658	293,755	339,413	82,141	5,657	87,798	0	60,003	60,003	3,068	5,962	9,029	83	948	1,030	45,741	445,877

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	453	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	483	442	238	216	211	359	345	376	154	142	145
Mar	21,008	23,496	24,921	5,125	6,102	6,240	3,865	4,371	4,586	463	628	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	4,856	728	870	780	226	260	251	451	546	588	271	213	233
May	32,374	33,792	33,411	8,839	9,325	8,986	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	38,811	11,045	10,352	9,737	6,562	6,612	6,532	1,357	1,233	1,114	393	302	331	867	835	806	341	313	335
Aug	40,043	39,072	35,792	10,990	10,295	9,385	6,695	6,569	6,015	1,357	1,242	929	388	311	307	863	848	727	379	306	308
Sep	34,491	33,330	32,370	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	263
Oct	30,141	28,794	28,890	8,368	7,501	7,545	5,375	5,107	5,344	1,052	815	765	316	260	272	675	617	644	259	226	246
Nov	23,331	23,359	22,309	5,812	6,003	5,741	4,316	4,370	5,344	620	638	497	237	238	235	481	484	476	192	185	194
Dec	20,579	20,561	20,741	5,318	5,256	5,174	3,902	4,019	5,344	502	453	385	229	220	220	421	393	398	166	143	136
ANNUAL	339,918	344,383	339,413	90,131	90,823	87,798	59,525	60,627	62,926	10,567	10,266	9,029	3,508	3,152	3,145	7,009	7,137	7,018	2,991	2,783	2,771

Wastewater/Water Production Ratios

	City of Las Vegas/Clark County*			City of Henderson			City of North Las Vegas			Boulder City			Big Bend Water District			All Entities **		
Month	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	0.38	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	0.27	0.30	0.29	0.30	0.11	0.11	0.10	0.61	0.58	0.61	0.35	0.37	0.37
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	0.53	0.28	0.34	0.31	0.33	0.34	0.36	0.12	0.13	0.13	0.62	0.59	0.61	0.40	0.44	0.46
Nov	0.56	0.58	0.63	0.38	0.40	0.39	0.39	0.38	0.41	0.18	0.17	0.20	0.67	0.53	0.66	0.50	0.51	0.55
Dec	0.64	0.67	0.69	0.43	0.47	0.44	0.44	0.43	0.45	0.23	0.24	0.27	0.63	0.64	0.68	0.57	0.60	0.61
AVG.	0.47	0.48	0.50	0.31	0.32	0.32	0.34	0.34	0.34	0.13	0.13	0.14	0.62	0.59	0.61	0.42	0.43	0.44

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	6,240	2,385	4,586	1,720	616	110	228	157	36,591	18,277
Apr	26,926	13,710	7,092	2,340	4,856	1,631	780	102	251	152	39,905	17,935
May	33,411	14,130	8,986	2,426	5,764	1,711	1,024	107	283	172	49,469	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	6,532	1,789	1,114	110	331	188	56,526	19,414
Aug	35,792	15,111	9,385	2,396	6,015	1,817	929	110	307	170	52,428	19,604
Sep	32,370	14,408	8,414	2,327	5,339	1,740	920	100	290	160	47,333	18,735
Oct	28,890	15,302	7,545	2,337	4,981	1,780	765	103	272	165	42,453	19,686
Nov	22,309	14,051	5,741	2,226	4,184	1,711	497	99	235	156	32,965	18,243
Dec	20,741	14,351	5,174	2,278	3,950	1,772	385	104	220	150	30,470	18,655
YTD	339,413	169,599	87,798	27,801	60,003	20,593	9,029	1,254	3,145	1,894	499,390	221,141

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	54	0	0	0
Sep	0	0	0	307	0	0	0
Oct	0	0	0	242	0	0	0
Nov	0	0	0	115	0	0	0
Dec	0	0	0	79	0	0	0
Total 2022	0	0	0	797	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