

CITY OF NEEDLES
WATER ACCOUNTING
MONTHLY CALCULATION SHEET
CALENDAR YEAR 2024

Pumped (Acre-Feet)													
Diversions - Pumped from Wells	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Well #8	0.00	0.00	0.00	0.00	0.00								0.00
Well # 15 (formerly #10)	89.95	70.21	103.04	113.54	132.90								509.64
Well #11	0.00	0.00	0.09	0.00	0.07								0.16
Well #12	10.74	6.78	13.56	51.77	56.20								139.05
Sub-Total	100.69	76.99	116.69	165.31	189.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	648.85
Delivered to Ft. Mojave Indian Tribe (AZ)	2.78	0.00	0.00	0.00	0.00								2.78
Delivered to Ft. Mojave Indian Tribe (CA)	0.00	8.30	1.79	1.90	6.20								18.19
Sub-Total	2.78	8.30	1.79	1.90	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.97
City of Needles' Net Diversion	97.91	68.69	114.90	163.41	182.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	627.88
Uses of Water													
Commercial Accounts	45.45	32.92	50.17	53.28	60.59								242.41
Residential Accounts	36.34	27.32	46.60	52.64	57.40								220.30
Golf Course	10.74	6.78	13.56	51.77	56.20								139.05
Parks, Ballparks, Cemetery	5.37	1.67	4.48	5.72	8.77								26.01
Total	97.90	68.69	114.81	163.41	182.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	627.77
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CALENDAR YEAR 2024
WASTEWATER TREATMENT PLANT

	Mean Flow	# Days	A/F	A/F Return
Jan	0.481	31	45.76	44.39
Feb	0.421	29	37.47	36.35
Mar	0.429	31	40.82	39.59
Apr	0.436	30	40.14	38.94
May	0.425	31	40.44	39.22
Jun		30	0.00	0.00
Jul		31	0.00	0.00
Aug		31	0.00	0.00
Sep		30	0.00	0.00
Oct		31	0.00	0.00
Nov		30	0.00	0.00
Dec		31	0.00	0.00
TOTAL	2.192	366	204.63	198.49

Daily mean flow x #days mo X 1,000,000 = gal/mo
divided by 7.48 divided by 43560 = A/F mo

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CALENDAR YEAR 2024

Diversions												
	Pumped (Acre-Feet)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Pumped from Wells												
Well #8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Well # 15 (FKA #10)	89.95	70.21	103.04	113.54	132.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Well #11	0.00	0.00	0.09	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Well #12	10.74	6.78	13.56	51.77	56.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sub-Total	100.69	76.99	116.69	165.31	189.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delivered to Ft. Mojave Indian Tribe (AZ)	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delivered to Ft. Mojave Indian Tribe (CA)	0.00	8.30	1.79	1.90	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sub-Total	2.78	8.30	1.79	1.90	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City of Needles' Net Diversion	97.91	68.69	114.90	163.41	182.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total												627.88

Return and Other Credits												
Measured Returns												
Sewer Plant's Rapid Infiltration Ponds ¹	44.39	36.35	39.59	38.94	39.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unmeasured Returns												
Percolation from Golf Course ²	0.00	0.00	0.00	30.79	11.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percolation from Parks ³	2.15	0.67	1.79	2.29	3.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percolation from Large Commercial Users ⁴	1.09	0.79	1.20	1.28	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
System Losses ⁵	0.01	0.00	0.09	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Septic Tank Returns ⁶	4.12	3.84	4.41	4.22	4.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Unmeasured Returns	7.37	5.30	7.50	38.57	20.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Returns	51.76	41.65	47.09	77.51	59.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total												277.99

Footnotes:
1/Calculated as WWTP Total Discharge*0.97.
2/Calculated as Monthly Delivery to Golf Course*Efficiency-Monthly ET. Efficiency =0.9
3/Calculated as Delivery to Parks,Ballparks,Cemetery*0.40.
4/Calculated as 24% of Deliveries to Commercial Accounts*0.10.
5/Calculated as City of Needles' Net Diversions-Total Uses.
6/Total Annual UMRF from septic tanks = 50. assumes 210 septic units*0.6 AF/Yr*0.40 (where 0.40 = UMRF Factor). Annual volume is distributed monthly using a monthly distribution factor.

Consumptive Use												
Diversion	97.91	68.69	114.90	163.41	182.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Measured Returns	44.39	36.35	39.59	38.94	39.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unmeasured Returns	7.37	5.30	7.50	38.57	20.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumptive Use	46.15	27.04	67.81	85.90	123.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total												627.88