

CITY OF NEEDLES  
 WATER ACCOUNTING  
 MONTHLY CALCULATION SHEET  
 CALENDAR YEAR 2024

Diversions - Pumped from Wells	Pumped (Acre-Feet)												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Well #8	0.00	0.00	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	153.86							663.50
Well #11	0.00	0.00	0.09	0.00	0.07	0.00							0.16
Well #12	10.74	6.78	13.56	51.77	56.20	77.87							216.92
<b>Sub-Total</b>	<b>100.69</b>	<b>76.99</b>	<b>116.69</b>	<b>165.31</b>	<b>189.17</b>	<b>231.73</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>880.58</b>
Delivered to Ft. Mojave Indian Tribe (AZ)	2.78	0.00	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	5.07							23.26
<b>Sub-Total</b>	<b>2.78</b>	<b>8.30</b>	<b>1.79</b>	<b>1.90</b>	<b>6.20</b>	<b>5.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>26.04</b>
<b>City of Needles' Net Diversion</b>	<b>97.91</b>	<b>68.69</b>	<b>114.90</b>	<b>163.41</b>	<b>182.97</b>	<b>226.66</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>854.54</b>
<b>Uses of Water</b>													
Commercial Accounts	45.45	32.92	50.17	53.28	60.59	64.62							307.03
Residential Accounts	36.34	27.32	46.60	52.64	57.40	71.00							291.30
Golf Course	10.74	6.78	13.56	51.77	56.20	77.87							216.92
Parks, Ballparks, Cemetery	5.37	1.67	4.48	5.72	8.77	13.18							39.19
<b>Total</b>	<b>97.90</b>	<b>68.69</b>	<b>114.81</b>	<b>163.41</b>	<b>182.96</b>	<b>226.67</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>854.44</b>

**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	0.482	30	44.38	43.05
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	2.674	366	249.01	241.54

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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Diversions													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
<b>Pumped from Wells</b>													
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	0.00
Well # 15 (FKA #10)	89.95	70.21	103.04	113.54	132.90	153.86	0.00	0.00	0.00	0.00	0.00	0.00	663.50
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	0.16
Well #12	10.74	6.78	13.56	51.77	56.20	77.87	0.00	0.00	0.00	0.00	0.00	0.00	216.92
<b>Sub-Total</b>	<b>100.69</b>	<b>76.99</b>	<b>116.69</b>	<b>165.31</b>	<b>189.17</b>	<b>231.73</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>880.58</b>
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	2.78
Delivered to Ft. Mojave Indian Tribe (CA)	0.00	8.30	1.79	1.90	6.20	5.07	0.00	0.00	0.00	0.00	0.00	0.00	23.26
<b>Sub-Total</b>	<b>2.78</b>	<b>8.30</b>	<b>1.79</b>	<b>1.90</b>	<b>6.20</b>	<b>5.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>26.04</b>
<b>City of Needles' Net Diversion</b>	<b>97.91</b>	<b>68.69</b>	<b>114.90</b>	<b>163.41</b>	<b>182.97</b>	<b>226.66</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>854.54</b>

Return and Other Credits													
<b>Measured Returns</b>													
Sewer Plant's Rapid Infiltration Ponds <sup>1</sup>	44.39	36.35	39.59	38.94	39.22	43.05	0.00	0.00	0.00	0.00	0.00	0.00	241.54
<b>Unmeasured Returns</b>													
Percolation from Golf Course <sup>2</sup>	0.00	0.00	0.00	30.79	11.66	28.12	0.00	0.00	0.00	0.00	0.00	0.00	70.56
Percolation from Parks <sup>3</sup>	2.15	0.67	1.79	2.29	3.51	5.27	0.00	0.00	0.00	0.00	0.00	0.00	15.68
Percolation from Large Commercial Users <sup>4</sup>	1.09	0.79	1.20	1.28	1.45	1.55	0.00	0.00	0.00	0.00	0.00	0.00	7.37
System Losses <sup>5</sup>	0.01	0.00	0.09	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
Septic Tank Returns <sup>6</sup>	4.12	3.84	4.41	4.22	4.12	3.96	0.00	0.00	0.00	0.00	0.00	0.00	24.69
<b>Total Unmeasured Returns</b>	<b>7.37</b>	<b>5.30</b>	<b>7.50</b>	<b>38.57</b>	<b>20.75</b>	<b>38.91</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>118.40</b>
<b>Total Returns</b>	<b>51.76</b>	<b>41.65</b>	<b>47.09</b>	<b>77.51</b>	<b>59.97</b>	<b>81.96</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>359.94</b>

**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													
<b>Diversion</b>	97.91	68.69	114.90	163.41	182.97	226.66	0.00	0.00	0.00	0.00	0.00	0.00	854.54
<b>Measured Returns</b>	44.39	36.35	39.59	38.94	39.22	43.05	0.00	0.00	0.00	0.00	0.00	0.00	241.54
<b>Unmeasured Returns</b>	7.37	5.30	7.50	38.57	20.75	38.91	0.00	0.00	0.00	0.00	0.00	0.00	118.40
<b>Consumptive Use</b>	<b>46.15</b>	<b>27.04</b>	<b>67.81</b>	<b>85.90</b>	<b>123.00</b>	<b>144.70</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>494.60</b>