



Water Treatment Plant Summary

(July 2023 – November 2023)

Public Works Commission Meeting – December 14, 2023



Raw Water Quality (July – September 2023)

←-----Hollywood Basin-----> C.B.

| Water Quality Constituents | Units | MCL or SMCL | Well 2 | Well 4 | Well 5 | Well 6 | Maple 1 | Maple 2 | LCW-1 |
|------------------------------|------------|-------------|------------|------------------|------------------|------------------|------------------|------------------|-----------|
| Total Dissolved Solids (TDS) | ppm | 1000 | 660 - 760 | 630 | 550 - 560 | 550 - 560 | 930 - 950 | 970 - 1000 | 640 - 660 |
| Iron | ppb | 300 | ND | 36 - 38 | 91 - 110 | 85 - 160 | ND | ND | ND - 34 |
| Manganese | ppb | 50 | 5.2 - 9.7 | 28 - 29 | 54 - 65 | 130 - 140 | 95 - 110 | 180 - 190 | 17 - 80 |
| Color | ACU | 15 | 10 | 5 | 3 | 5 | ND | ND | 3 |
| Odor | TON | 3 | 8 | 8 | ND | ND | ND | ND | 2 |
| Arsenic (P) | ppb | 10 | 1.6 | 3.7 – 4.0 | 2.5 – 5.1 | 1.2 – 2.4 | 1.2 – 1.6 | 1.6 – 1.8 | ND |

Note: Primary constituents – Health related water quality constituents. All others are aesthetic related.



Raw Water Quality (October – November 2023)

←-----Hollywood Basin-----> C.B.

| Water Quality Constituents | Units | MCL or SMCL | Well 2 | Well 4 | Well 5 | Well 6 | Maple 1 | Maple 2 | LCW-1 |
|------------------------------|------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|
| Total Dissolved Solids (TDS) | ppm | 1000 | 870 - 880 | 620 | 530 - 540 | 540 - 550 | 930 | 960 | 630 - 640 |
| Iron | ppb | 300 | ND | 36 - 40 | 110 | 110 - 130 | ND | ND | ND |
| Manganese | ppb | 50 | 11 | 26 - 27 | 61 - 63 | 140 | 81 - 83 | 150 - 160 | 20 |
| Color | ACU | 15 | 10 | 5 | 3 | 3 - 5 | ND | ND | 3 |
| Odor | TON | 3 | 2 - 8 | 2 - 8 | ND | ND - 2 | ND | ND | 2 |
| Arsenic (P) | ppb | 10 | 1.5 – 1.6 | 3.1 – 3.5 | 4.1 – 4.2 | 1.5 – 2.4 | 1.5 – 1.7 | 1.5 – 1.6 | ND |

Note: Primary Constituent – Health related water quality constituents. All others are aesthetic related.



Finished Water Quality (July - September 2023)

| Plant Effluent | Units | MWD | MCL or SMCL | July | August | September |
|----------------|-------|-----------|-------------|-------------|---------|-------------|
| TDS | ppm | 599 - 609 | 1000 | 420 | Offline | 400 |
| Turbidity | NTU | 0.04 | | 0.10 – 0.15 | Offline | ND – 0.20 |
| Color | ACU | 1 - 2 | 15 | ND | Offline | ND |
| Odor | TON | 1 | 3 | ND | Offline | ND |
| Iron | ppm | NA | 0.3 | ND | Offline | ND |
| Manganese | ppb | NA | 50 | ND | Offline | ND |
| Total Sulfides | ppm | NA | | ND | Offline | ND |
| Arsenic (P) | ppb | NA | 10 | 0.54 – 1.0 | Offline | 0.70 - 0.85 |



Finished Water Quality (October - November 2023)

| Plant Effluent | Units | MWD | MCL or SMCL | October | November | December |
|----------------|-------|-----------|-------------|-----------|-------------|----------|
| TDS | ppm | 599 - 609 | 1000 | 390 | 400 | TBD |
| Turbidity | NTU | 0.04 | | ND – 0.15 | ND | TBD |
| Color | ACU | 1 - 2 | 15 | ND | ND | TBD |
| Odor | TON | 1 | 3 | ND | ND | TBD |
| Iron | ppm | NA | 0.3 | ND | ND | TBD |
| Manganese | ppb | NA | 50 | ND | ND | TBD |
| Total Sulfides | ppm | NA | | ND | ND | TBD |
| Arsenic (P) | ppb | NA | 10 | ND – 0.64 | 0.66 – 0.79 | TBD |



Finished Water Quality (October - November 2023)

TDS (ppm)





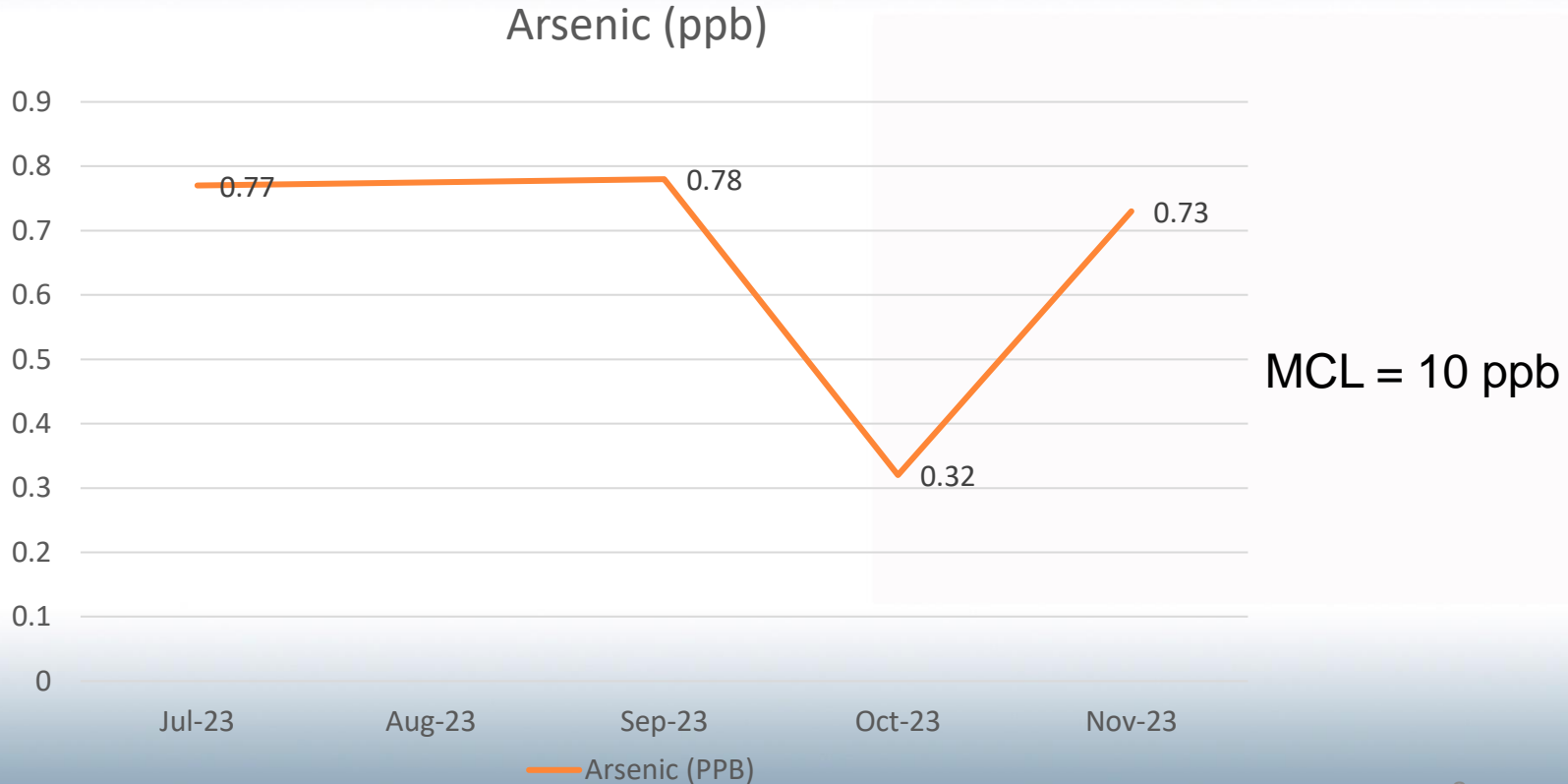
Finished Water Quality (October - November 2023)

Turbidity (NTUs)





Finished Water Quality (October - November 2023)





OMF / RO Operation & Performance

- Oxidant Media Filters removed iron & manganese & sulfides to Non-Detect levels
- Arsenic levels of finished water after blending with RO permeate below MCL of 10 ppb (ND to 1.0 ppb)
- Iron & Manganese levels of finished water removed to ND levels

OMF
(Greensand
Filters)

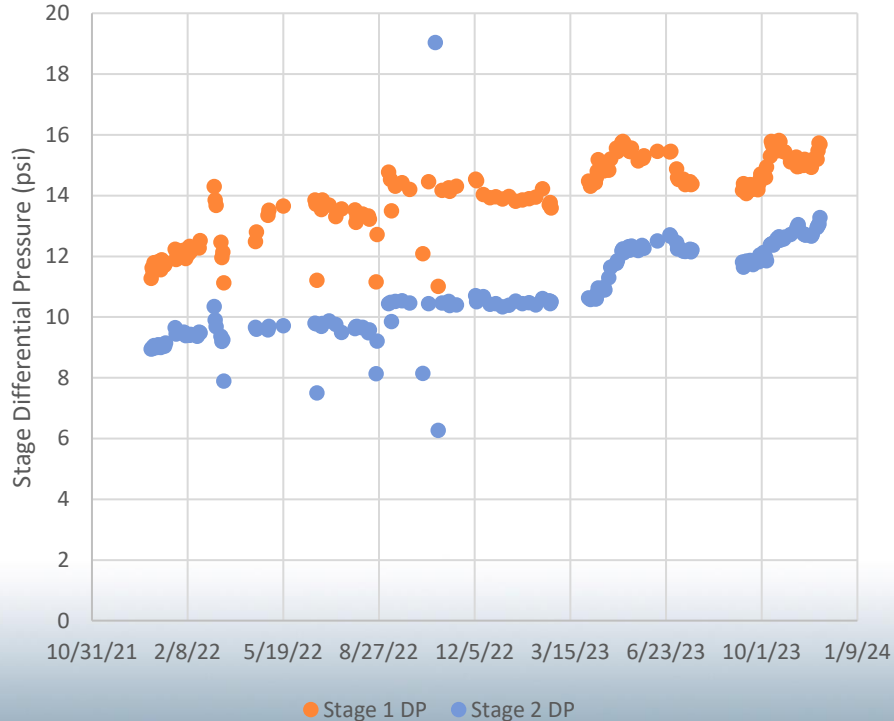


Reverse
Osmosis





RO Operation



- Some accumulation in differential pressure
 - Clean in Place
 - Scheduled Dec. 15, 2023
- Silt Density Index
 - Target: < 3 mg/L
 - Actual: <1 mg/L
- Average: 80% recovery rate



WTP Production





WTP Production

- Approximately 1,129 acre - ft. treated and delivered since April 2022
- Approximately \$282,155 credit reduction to MWD imported water bills
- Last three months (Sept. – Nov 2023) – averaged approximately 99 acre – ft. / month



WTP Activities & Next Steps

- Combination of continuous running / resting wells from two basins
- WTP online during MWD feeder shutdown in November 2023
- Next steps - Well Rehabilitation

Questions

