



Water Treatment Plant Summary

April 2022 – January 2023

Public Works Commission Meeting – February 9, 2023



Raw Water Quality (Apr. 2022 – Jan. 2023)

Water Quality Constituents	Units	MCL Or SMCL	Well 2	Well 4	Well 5	Maple 1	Maple 2
TDS	ppm	1000	500 -770	500 -690	530 - 610	760 - 970	890 - 970
Iron	ppb	300	ND - 23	34 - 52	70 - 100	ND	ND
Manganese	ppb	50	ND - 6.7	30 - 42	24 -47	78 - 160	160 - 210
Color	ACU	15	5 - 10	ND - 3	ND - 15	ND	ND
Odor	TON	3	ND - 4	ND - 8	ND - 15	ND	ND - 3
Arsenic	ppb	10	1.7 -3.3	5.9 -18	0.71 – 2.9	1.5 – 2.2	1.5 - 2.2



Finished Water Quality (April - Sept. 2022)

Plant Effluent	Units	MWD	MCL Or <i>SMCL</i>	April	May	June	July	August	September
TDS	ppm	599 - 609	<i>1000</i>	400	380	370	400	390	400
Turbidity	NTU	0.04		ND	ND	ND	ND	0.10	0.15
Color	ACU	1 - 2	<i>15</i>	ND	ND	ND	ND	ND	ND
Odor	TON	1	<i>3</i>	2	2	1	1	1	2
Iron	ppb	NA	<i>300</i>	ND	ND	ND	ND	ND	ND
Manganese	ppb	NA	<i>50</i>	ND	ND	ND	ND	ND	ND
Total Sulfides	ppm	NA		ND	ND	ND	ND	ND	ND
Arsenic	ppb	NA	10	1.7	1.9-2.2	ND-2.2	ND	2.1	0.7 – 0.86



Finished Water Quality (Oct. - Dec. 2022)

Plant Effluent	Units	MWD	MCL Or SMCL	October	November	December
TDS	ppm	599 - 609	1000	370	390	390
Turbidity	NTU	0.04		ND	ND - 0.15	ND-.25
Color	ACU	1 - 2	15	ND	ND	ND
Odor	TON	1	3	ND - 4	ND	ND-4
Iron	ppb	NA	300	ND	ND	ND
Manganese	ppb	NA	50	ND	ND	ND
Total Sulfides	ppm	NA		ND	ND	ND
Arsenic	ppb	NA	10	0.81- 0.90	0.71-0.89	0.81-2.0



Finished Water Quality (LCW-1 Blend)

Plant Effluent	Units	MWD	MCL Or <i>SMCL</i>	Current Finished Water (Dec. 2022)	LCW-1 Blend
TDS	ppm	599 - 609	1000	390	420
Turbidity	NTU	0.04		ND – 0.25	0.10
Color	ACU	1 - 2	15	ND	ND
Odor	TON	1	3	ND	ND
Iron	ppb	NA	300	ND	ND
Manganese	ppb	NA	50	ND	ND
Total Sulfides	ppm	NA		ND	ND
Arsenic	ppb	NA	10	0.81 – 2.0	0.77



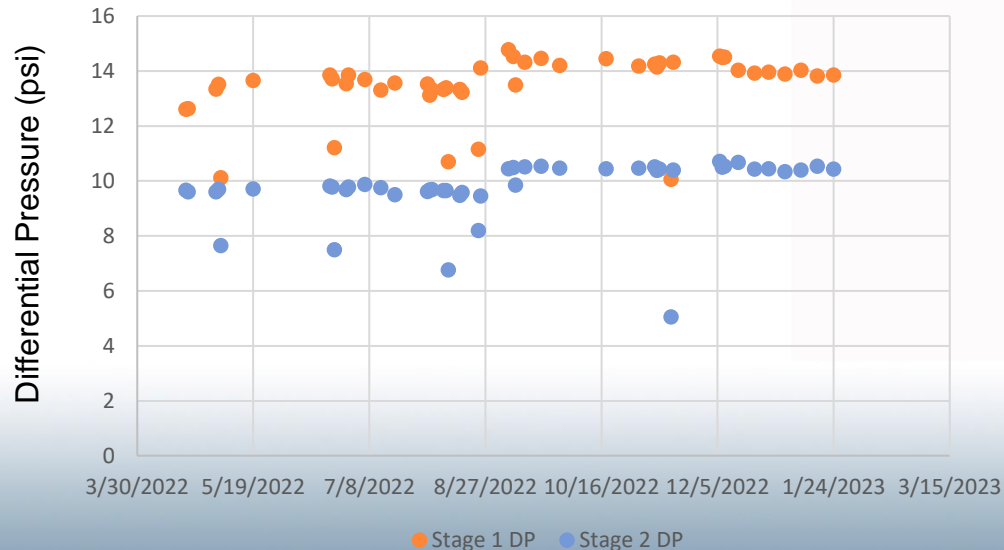
OMF / RO Operation & Performance

- Oxidant Media Filters removed iron & manganese to Non-Detect levels
- Arsenic levels reduced (ND < 3 ppb)
- RO further removed arsenic to Non-Detect Levels
- Arsenic levels of finished water after blending with RO permeate below MCL of 10 ppb (<1 ppb to 2 ppb)



RO Operation

- Minimal accumulation in differential pressure after 9 months of operation => Clean in Place conducted in October 2022
- Average: 80% recovery rate





WTP PRODUCTION

Treated Water Production (April 2022 – January 2023)





WTP OPERATIONS

- Continuous short durations
- 2 to 10+ days of rest
- Some combination of continuous running / resting
- Declining water table with minimal recharge despite rainfall
- Equipment & Warranty Challenges



WTP Next Steps

- Approval of WTP permit amendment by DDW (anticipated in February 2023)
- Prepare LCW-1 flushing, disinfection, & collection of final water quality samples
- Send final lab results to DDW for approval
- DDW provides final permit & authorization to distribute LCW-1 blended water in late February 2023



Questions

