

AGENDA ITEM

June 4, 2019

Subject: Source Water Testing

Department: Admin

The attached bid for additional source water testing at the Nevada Water Treatment Plant will allow for monitoring of source water in connection with proposed WTP improvements. Alliance Water Resources will submit samples to PACE Analytical over a three-month period to adequately characterize RO feed water and blending water quality. Cost of all tests is not to exceed \$20,000, and will be paid from account 500-5-4425-428, WTP Capital Projects.

Feb-12-2019

Updated sampling plan

ps 1092

Source Water Quality Sampling

Additional source water quality monitoring is recommended at the Nevada Water Treatment Plant (WTP). Source water quality sampling should be conducted over a three-month period to adequately characterize RO feed water quality and blending water quality.

PARAMETER	WELL PUMP 1 & 2 (BLENDING)	WELL PUMP 3 & 4 (RO FEED)	SAMPLING FREQUENCY	
Temperature (on site)	X	X	Weekly	\$0
pH (on site)	X	X	Weekly	\$0
Conductivity at 25 °C	X	X	Weekly	\$10 \$480
Dissolved oxygen (on site)	X	X	Weekly	\$0
Total dissolved solids	X	X	Weekly	\$15 \$720
Calcium	X	X	Weekly	\$10 \$480
Magnesium	X	X	Weekly	\$10 \$480
Total alkalinity (as CaCO3)	X	X	Weekly	\$17 \$816
Chloride	X	X	Weekly	\$20 \$960
Turbidity	X	X	Weekly	\$15 \$720
Color	X	X	Weekly	\$15 \$720
Hydrogen sulfide	X	X	Weekly	\$40 \$1,920
Radium (226 + 228)	X	X	Every 2 weeks	\$7582 \$3,600
Beta particle and photon emitters	X	X	Every 2 weeks	\$40x2 \$1,920
Alpha emitters	X	X	Every 2 weeks	\$40 \$960
Settleable solids	X	X	Every 2 weeks	\$15 \$360
Total suspended solids	X	X	Every 2 weeks	\$15 \$360
Total organic carbon (TOC)	X	X	Every 2 weeks	\$125 \$600
Dissolved organic carbon (DOC)	X	X	Every 2 weeks	\$125 \$600
Sodium	X	X	Every 2 weeks	\$10 \$240
Potassium	X	X	Every 2 weeks	\$10 \$240
UV absorbance at 254 nm	X	X	Every 2 weeks	\$50 \$1,200
Iron, total and dissolved	X	X	Every 2 weeks	\$10x2 \$480
Manganese, total and dissolved	X	X	Every 2 weeks	\$10x2 \$480
Barium (minimum accuracy 0.01 mg/L)	X	X	Every 2 weeks	\$10 \$240
Ammonia-N	X	X	Every 2 weeks	\$20 \$480

Note: On site sampling
 Amount saved:
 \$7286 + 3000 (concrete) + 54 (impact)
 48
 \$7,050

\$11,760
 24

Feb 12 - 2019

Updated Sampling plan

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PARAMETER	WELL PUMP 1 & 2 (BLENDING)	WELL PUMP 3 & 4 (RO FEED)	SAMPLING FREQUENCY	
Sulfate	X	X	Every 2 weeks	\$20 \$480
Fluoride	X	X	Every 2 weeks	\$20 \$480
Heterotrophic plate count (HPC)	X	X	Every 2 weeks	\$40 \$960
Silica (as SiO ₂) (total and dissolved)		X	Every 2 weeks	\$20x2 \$480
Aluminum		X	Monthly	\$10 \$60
Arsenic		X	Monthly	\$14 \$84
Bromide		X	Monthly	\$35 \$210
Cadmium		X	Monthly	\$10 \$60
Chromium, total		X	Monthly	\$10 \$60
Chromium, hexavalent		X	Monthly	\$80 \$480
Nitrate		X	Monthly	\$20 \$120
Nitrite		X	Monthly	\$20 \$120
Phosphate		X	Monthly	\$20 \$120
Strontium		X	Monthly	\$10 \$60

\$2,400

\$11,719

Courier Service

\$50x6 \$300

Environmental Impact Fee (Per Invoice)

\$9x6 \$54

\$15,879