RECLAMATION
Managing Water in the West

Feedwater Chemistry

The WQIC can treat waters from a variety of on-site sources, and can replicate many brackish water chemistries. Below is a chemical breakdown of the on-site feedwaters available. For more information, visit http://www.usbr.gov/lc/yuma/wquality/default.htm

On-site Well

Sulfate (SO4) mg/L	290
Sodium (Na) mg/L	145
Potassium (K) mg/L	4.3
Calcium (Ca) mg/L	134
Magnesium (Mg) mg/L	35.5
Barium (Ba) mg/L	0.11
Strontium (Sr) mg/L	1.43
Chloride (Cl) mg/L	196
Nitrate (NO3) mg/L	0.64
Conductivity (Cond.) us/cm	1,600
pH	7.8
Total Alkalinity mg/L as CaCO3	220
Total Dissolved Solids (TDS) mg/L	1,090

Colorado River

Sulfate (SO4) mg/L	272
Sodium (Na) mg/L	113
Potassium (K) mg/L	4.7
Calcium (Ca) mg/L	81.6
Magnesium (Mg) mg/L	27.4
Barium (Ba) mg/L	0.11
Strontium (Sr) mg/L	1.11
Chloride (Cl) mg/L	102
Nitrate (NO3) mg/L	1.3
Conductivity (Cond.) us/cm	1,120
pH	8.3
Total Alkalinity mg/L as CaCO3	116
Total Dissolved Solids (TDS) mg/L	780

Agricultural Drain

Sulfate (SO4) mg/L	787
Sodium (Na) mg/L	613
Potassium (K) mg/L	8.1
Calcium (Ca) mg/L	159
Magnesium (Mg) mg/L	70.2
Barium (Ba) mg/L	0.033
Strontium (Sr) mg/L	2.39
Chloride (Cl) mg/L	665
Nitrate (NO3) mg/L	10.9
Conductivity (Cond.) us/cm	3,930
pH	8.06
Total Alkalinity mg/L as CaCO3	289
Total Dissolved Solids (TDS) mg/L	2,940

Pretreated Feed

Sulfate (SO4) mg/L	804
Sodium (Na) mg/L	599
Potassium (K) mg/L	7.9
Calcium (Ca) mg/L	90.5
Magnesium (Mg) mg/L	50
Barium (Ba) mg/L	0.014
Strontium (Sr) mg/L	1.4
Chloride (Cl) mg/L	660
Nitrate (NO3) mg/L	11.1
Conductivity (Cond.) us/cm	3,610
pH	5.1
Total Alkalinity mg/L as CaCO3	3.6
Total Dissolved Solids (TDS) mg/L	2,450

R.O. Product

Sulfate (SO4) mg/L	4.36
Sodium (Na) mg/L	64.4
Potassium (K) mg/L	0.9
Calcium (Ca) mg/L	0.74
Magnesium (Mg) mg/L	0.43
Barium (Ba) mg/L	<0.001
Strontium (Sr) mg/L	0.011
Chloride (Cl) mg/L	94
Nitrate (NO3) mg/L	6.33
Conductivity (Cond.) us/cm	367
pH	5.72
Total Alkalinity mg/L as CaCO3	4.49
Total Dissolved Solids (TDS) mg/L	186

R.O. Reject

Sulfate (SO4) mg/L	2,730
Sodium (Na) mg/L	1,890
Potassium (K) mg/L	25
Calcium (Ca) mg/L	299
Magnesium (Mg) mg/L	157
Barium (Ba) mg/L	0.046
Strontium (Sr) mg/L	4.68
Chloride (Cl) mg/L	2,090
Nitrate (NO3) mg/L	19.1
Conductivity (Cond.) us/cm	10,100
pH	4.74
Total Alkalinity mg/L as CaCO3	2.21
Total Dissolved Solids (TDS) mg/L	7,820

For more information about how you can use the WQIC to test your water treatment processes and/or technology, contact Teh-An (Daniel) Hsu, Research Coordinator, Yuma Area Office, Bureau of Reclamation, at (520) 343-8229. You can also e-mail him at dhsu@lc.usbr.gov.

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