

CAP's Water Quality Monitoring Program

Water Quality Standards Task Force
May 24, 2017
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CAP Water Quality Monitoring

- Purpose
 - Customer Service
 - Inform CAP O&M
 - Not a Water Quality Compliance Program
- Water Quality Events that Impact CAP Operations
 - Alamo Lake Releases to Bill Williams River
 - Lake Pleasant Stratification
 - Changes in Canal Flows (Seasonal)
 - Aquatic Biology Happens!
- Storm Water is Generally not Intercepted by CAP



Annual Water Quality Reports



Real-time Monitoring

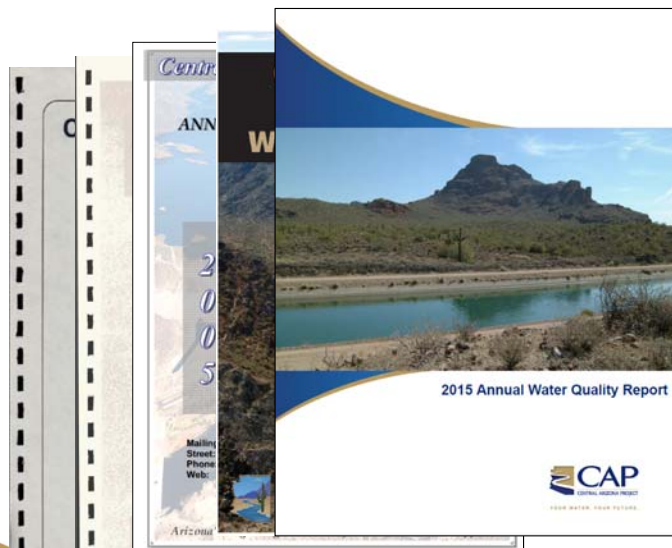
- CAP has 3 real-time monitoring locations
 - Data is available on CAP's public website

Canal Water Quality as of 2017-05-17 at 06:46:02

Location	Turbidity (ntu)	Temperature (F)	Conductivity (μ S/cm)	pH	Dissolved Oxygen (mg/l)	Dissolved Oxygen (% Sat.)
Lake Havasu @ CAP Intake	5					
Phoenix @ 7th St	3	70	948.7	8.1	9.9	112.0
Mesa @ McDowell Rd	7	71	846.0	8.1	9.8	111.4



Annual Water Quality Reports



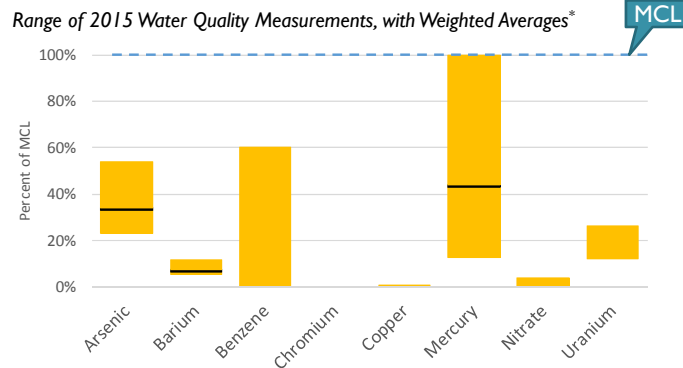
2015 Analyte Table

Analyte	Units	Range of Measured Values	Average Value	US EPA Maximum Contaminant Level (MCL) (Health-based)	US EPA Secondary Maximum Contaminant Level (Aesthetics-based)
Temperature	°F	54.7 – 54.7	55.6	-	-
Dissolved Oxygen	mg/L	4.11 – 11.72	9.28	-	-
Field Conductivity	µS/cm	897 – 1007	973	-	-
pH		7.7 – 8.6	8.2	-	8.5 – 8.5
Alkalinity in CaCO ₃ units	mg/L	110 – 140	125	-	-
Ammonia Nitrogen	mg/L	ND – 0.87	Note 1	-	-
Barium, Total, ICAP/MS	µg/L	110 – 230	120	2000	-
Bromide	µg/L	87 – 110	87	-	-
Calcium, Total, ICAP	mg/L	62 – 160	75	-	-
Chloride	mg/L	62 – 98	91	-	250
Copper, Total, ICAP/MS	µg/L	ND – 8	Note 1	1300	1000
Dissolved Organic	mg/L	2.7 – 4.2	3.2	-	-
Iron, Dissolved ICAP	mg/L	ND – 0.02	Note 1	-	-
Iron, Total, ICAP	mg/L	0.02 – 5.00	0.18	-	0.3
Magnesium, Total, ICAP	mg/L	28 – 32	28	-	-
Manganese, Total, ICAP	µg/L	2 – 160	10	-	50
Nitrate as Nitrogen by IC	mg/L	ND – 0.38	Note 1	10	-
Orthophosphate-P	mg/L	ND – 0.02	Note 1	-	-
Potassium, Total, ICAP	mg/L	4.4 – 6.3	4.95	-	-
Silica	mg/L	5.8 – 40.0	8.9	-	-
Sodium, Total, ICAP	mg/L	86 – 110	95	-	-
Specific Conductance	µS/cm	880 – 1000	945	-	-
Strontium, ICAP	mg/L	1.0 – 1.5	1.2	-	-
Sulfate	mg/L	230 – 260	248	-	250
Total Dissolved Solids	mg/L	610 – 750	649	-	500
Total phosphorus-P	mg/L	ND – 0.04	Note 1	-	-
Total Suspended Solids	mg/L	ND – 360	Note 1	-	-
Turbidity	NTU	0.27 – 5.70	1.48	-	-
Metals / Priority Pollutants					
Arsenic	µg/L	2.3 – 5.4	3.3	10	-
Chromium	µg/L	ND	Note 1	100	-
Mercury	µg/L	0.25-2.00	0.66	2	-
Uranium	µg/L	3.6-4.3	3.9	30	-
VOC's					
Benzene	µg/L	ND-3.0	Note 1	5	-



Drinking Water Standards

- CAP water is generally well below the Primary Maximum Contaminant Levels (MCLs) established by the Safe Drinking Water Act

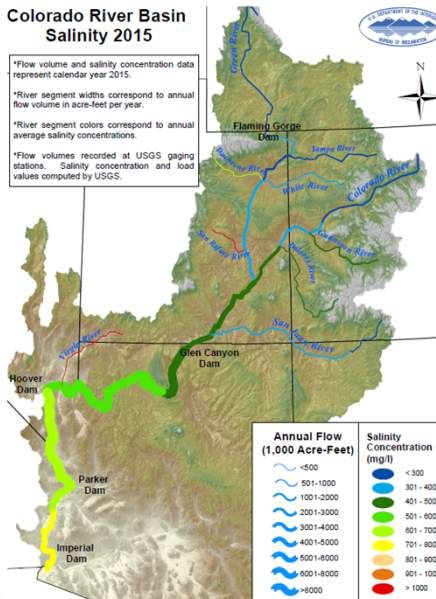


*Average values only calculated if detected consistently throughout year.

Salinity

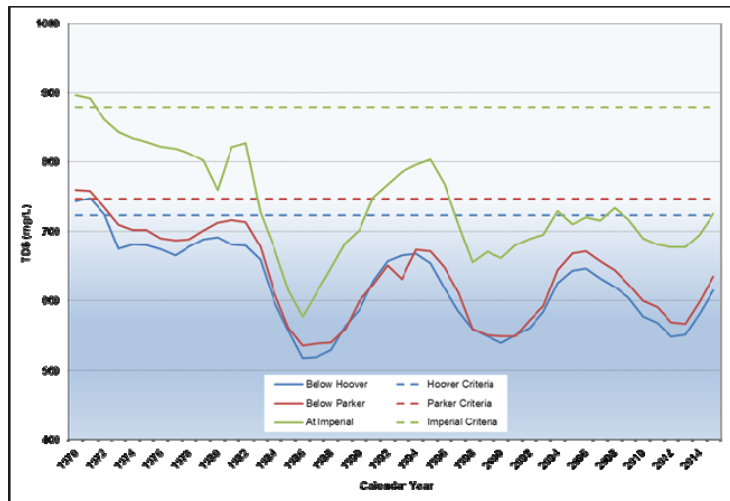
Colorado River Basin Salinity 2015

*Flow volume and salinity concentration data represent calendar year 2015.
*River segment widths correspond to annual flow volume in acre-feet per year.
*River segment colors correspond to annual average salinity concentrations.
*Flow volumes recorded at USGS gaging stations. Salinity concentration and load values computed by USGS.



CAP
CENTRAL ARIZONA PROJECT

Salinity



CAP
CENTRAL ARIZONA PROJECT

PROTECT
LAKE MEAD

The logo features the words "PROTECT" and "LAKE MEAD" in a bold, blue, sans-serif font. Below the text are four horizontal wavy lines, also in blue, representing water.