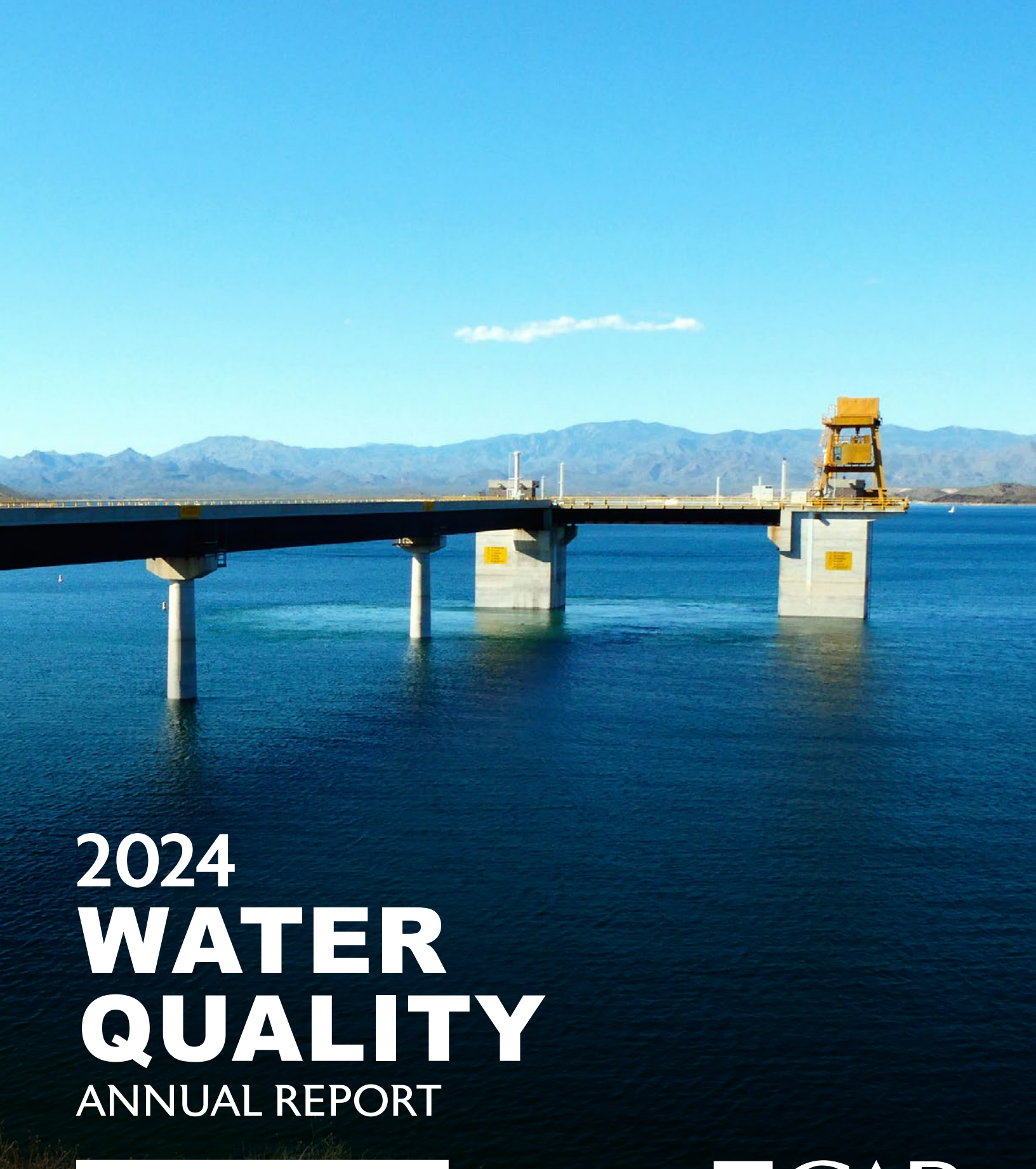


2024 WATER QUALITY ANNUAL REPORT

Central Arizona Water Conservation District
Water Transmission

CAP
CENTRAL ARIZONA PROJECT

YOUR WATER

Central Arizona Project (CAP) reliably delivers Colorado River water from Lake Havasu, located on Arizona's western border, to central and southern Arizona. The total CAP system is 336 miles long, lifts water approximately 3,000 feet, and includes open canals, inverted siphon pipelines, tunnels, pumping plants, check structures, turnouts, and the Lake Pleasant storage reservoir.

The CAP system provides a means for nearly 1.5 million acre feet (MAF) of Arizona's Colorado River allotment (totaling 2.8 MAF) to be delivered to the most populous areas of the state and reduce the use of groundwater for municipalities, agriculture, and other activities.

Central Arizona Water Conservation District (CAWCD), with more than 60 long-term stakeholders, is Arizona's largest supplier of renewable water. Stakeholders are categorized in two distinct user groups: municipal and industrial (M&I), and Native American Tribes. They treat and use CAP's Colorado River water to operate businesses, water crops, and maintain households, all of which are critical to the quality of life in Arizona.

> ***"Water links us to our neighbors in a way more profound and complex than any other."***
>
> ***- John Thorson***

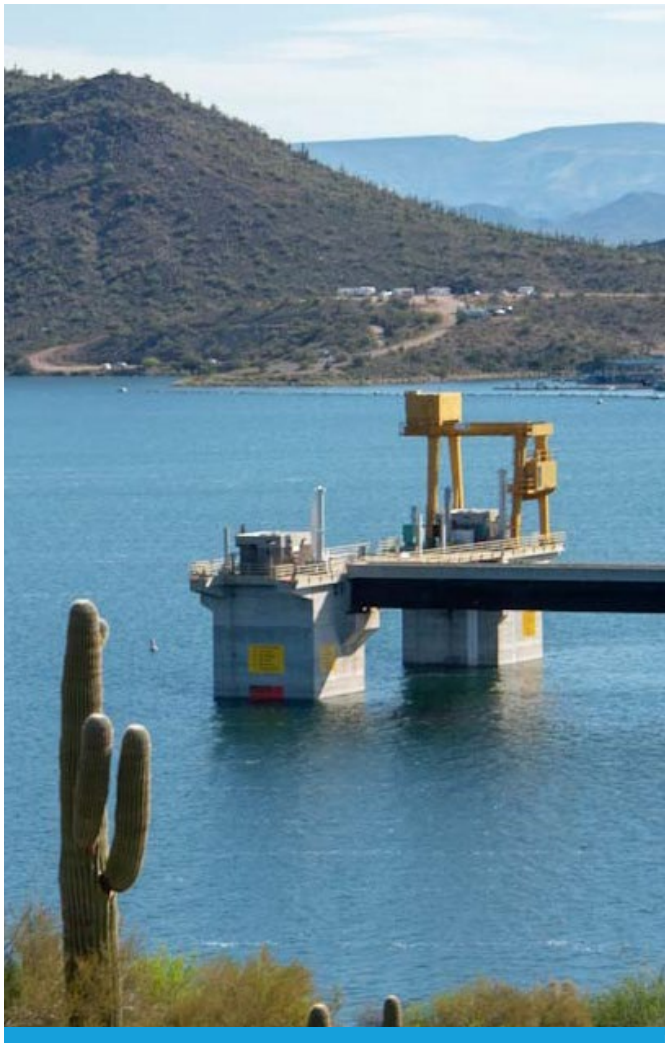
CAP WATER SOURCES

CAWCD does not provide potable water directly to the public, but supplies raw, untreated Colorado River water to its various stakeholders. The primary CAP intakes are at the southern-most portion of Lake Havasu, at a depth of approximately 24 feet.

Lake Pleasant is CAP's 10,000 surface-acre storage reservoir and is located just north of Phoenix. The reservoir is strategically utilized based on demand, while taking advantage of the lowest power rates possible. In general, Colorado River water is pumped into Lake Pleasant from October to May, and water is drawn from the reservoir during summer months. Therefore, depending on the time of year, CAP stakeholders may receive water that solely originates from the Colorado River, or a blend of water from the river and Lake Pleasant.

Each of these sources presents its own unique challenges. The surface waters are exposed to various watershed-related events and activities, such as stormwater runoff, treated wastewater discharge, recreation, wildlife, algal blooms, and other factors that may affect water quality.

Although CAP's raw water is considered to be of high quality, stakeholders filter, disinfect, and apply other necessary treatments to the water before it is delivered through distribution systems for domestic use.



CAP HISTORICAL WATER QUALITY

From 1985 to 1995, the United States Bureau of Reclamation (USBR) and CAWCD cooperated with the United States Geological Survey (USGS) to implement a water quality sampling program. USGS collected monthly and quarterly grab samples at three sites in the CAP system and tested more than 50 parameters. Historical CAP water quality data can be viewed by entering "CAP Canal" as the Site Name on the USGS Water Quality website:

Historic Water Quality Data

In 1996, CAWCD took over the water quality sampling program and customized it based on recommendations from stakeholders. Since that time, the program has continued to expand to include additional sites and parameters. CAWCD produces Annual Water Quality reports which summarize water quality measured in the canal throughout the calendar year. Recent reports are available on CAP's AquaPortal website (CAP AquaPortal - Annual Reports).

Reports from 1996-2016 reports are available upon request.

CAP BASELINE WATER QUALITY PROGRAM

MISSION

In 2019, CAP's Water Quality Program re-focused its efforts to better meet the needs of its stakeholders, and in doing so, created a Mission Statement and goals that provide a direction for moving forward:

> *The Water Quality Program (Program) provides information and recommendations to CAP Operations and Maintenance to help maintain the quality of CAP water; the Program supports the overall goal of its Municipal Stakeholders by providing a broad understanding of raw water quality conditions; the Program ensures that Non-Project sources comply with established standards; and the Program supports all other Stakeholder groups by providing valuable water quality information that helps to achieve their individual goals.*

The Program has implemented a monitoring approach that consists of both continuous (real-time) measurements and monthly/semi-annual grab samples. Sampled constituents align with the Non-Project Water Quality Guidance Document, but also include additional constituents that may be of public interest.

A comprehensive database management system is utilized to store historical and current water quality data, and a user-friendly website known as AquaPortal has been created to make the data easily accessible to the public (CAP AquaPortal).

CONTINUOUS MEASUREMENTS

CAWCD monitors basic water quality in near real-time at two locations along the canal; CAP Headquarters (7th Street) and at the Roosevelt Water Conservation District turnout in Mesa, AZ. Both stations utilize a Hydrolab DS5X multiparameter meter to measure temperature, conductivity, pH, TDS, and dissolved oxygen. Meters are calibrated and maintained monthly to provide reasonably accurate data. Data is uploaded from each water quality meter every 15 minutes and displayed on AquaPortal - Current Conditions.

> **In April 2024, the RWCD sensor was decommissioned as part of a replacement project; a new sensor will be installed in 2025.*

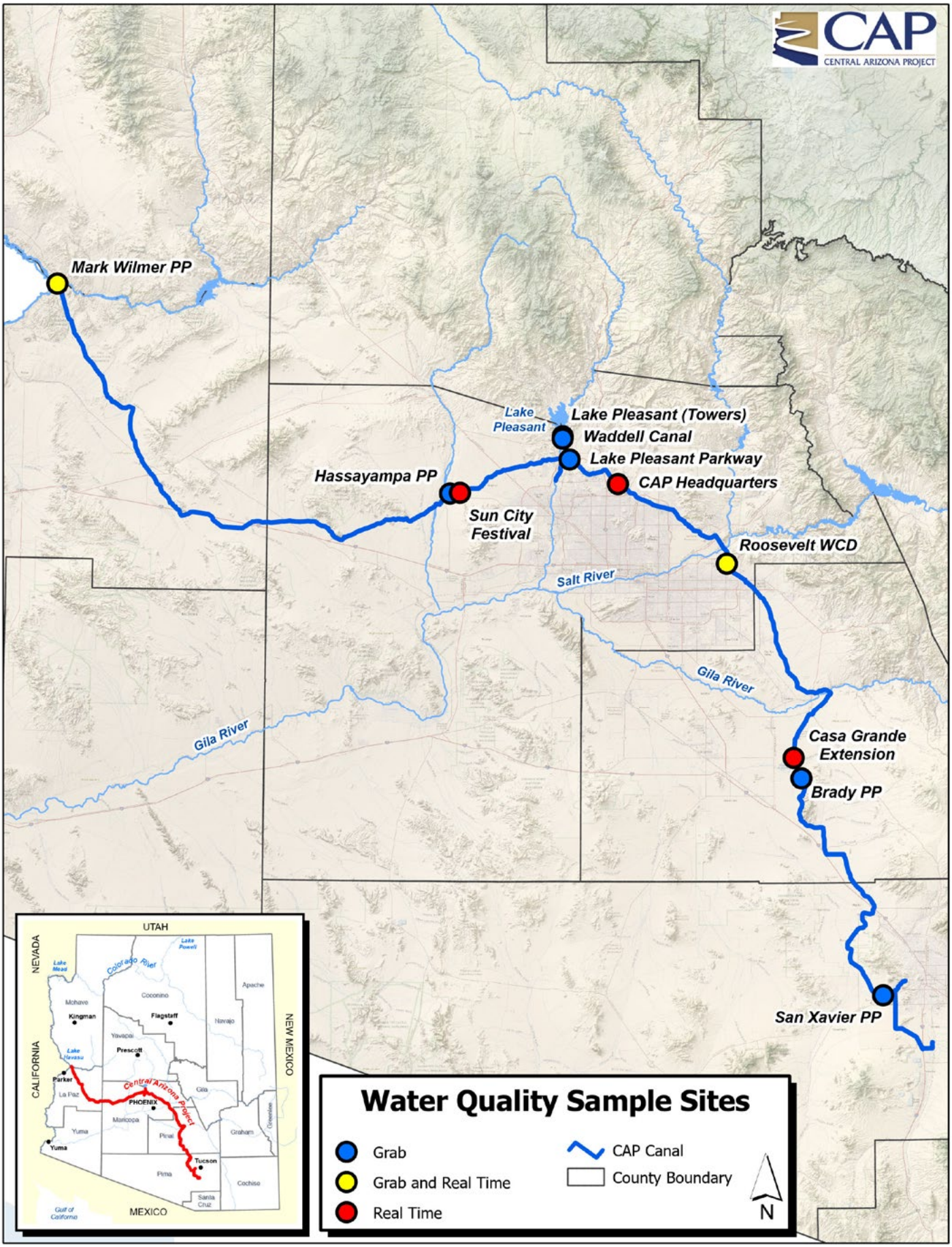
Real-time turbidity sensors are currently installed at five permanent locations, including Mark Wilmer Pumping Plant, Sun City Festival, CAP Headquarters, Roosevelt Water Conservation District Turnout, and the Casa Grande Extension Turnout (see map on Page 6). These sensors upload data every hour to AquaPortal - Current Conditions.

GRAB SAMPLES

Monthly grab samples are collected at seven locations (see map on page 6). Each monthly sample includes testing for 47 water quality "priority constituents" (as listed in Table A-1 of the Guidance Document), as well as 12 additional constituents.

Semi-annual samples are collected from four sites (see map on page 6). Semi-annual samples include the monthly constituents, 178 contaminants listed in Table A-2 of the Guidance Document, and approximately 85 additional contaminants.

CAWCD contracts with State of Arizona licensed laboratories to perform the water quality analyses. Verified results for priority constituents are posted on AquaPortal - Data Set. Results for the remaining constituents, which are not commonly detected in the CAP system, are available upon request.


CAP
CENTRAL ARIZONA PROJECT
Mark Wilmer PP
Lake Pleasant
Lake Pleasant (Towers)
Waddell Canal
Lake Pleasant Parkway
CAP Headquarters
Hassayampa PP
Sun City Festival
Roosevelt WCD
Salt River
Gila River
Gila River
Casa Grande Extension
Brady PP
San Xavier PP
UTAH
NEVADA
CALIFORNIA
NEW MEXICO
MEXICO
Lake Mead
Lake Powell
Colorado River
Lake Havasu
Central Arizona Project
PHOENIX
Kingman
Flagstaff
Prescott
Parker
La Paz
Yuma
Tucson
Coconino
Mohave
Yavapai
Apache
Navajo
Gila
Maricopa
Pinal
Graham
Greenlee
Pima
Cochise
Santa Cruz
Gulf of California
Water Quality Sample Sites
Grab
Grab and Real Time
Real Time
CAP Canal
County Boundary
N

2024 MONITORING RESULTS

Although the CAP system is not regulated as a Water of the United States, CAWCD tests for a wide range of constituents to inform stakeholders of the quality of water that they are receiving. As previously noted, the CAWCD baseline monitoring program aligns with the Guidance Document for Introducing Non-Project Water. The Guidance Document identifies 47 priority constituents with Introduction and Delivery standards (Table A-1) and 178 additional contaminants that should not be introduced (Table A-2).

Although Colorado River water is considered to be "consistent and stable", several naturally occurring metals (Barium, Manganese, Molybdenum, Potassium, and Uranium) continued to show an increasing trend, as they were more than 10% higher in 2024 than the 5-year average (2019-2023; see Table on Page 8). Additionally, Bromide, Chloride, Nitrate, and TDS were more than 10% higher than the 5-year average. Aluminum, Chromium, and Hexavalent Chromium all showed decreases of more than 20% from the 5-year average. Deviations from the 5-year average are likely related to higher than normal spring runoff events in both 2023 and 2024, as well as impacts from reduced flows in the Colorado River basin (and subsequently the CAP System).

There were occasional short-term spikes in various other priority constituents at individual sampling stations which were likely related to CAP Operations and the alternating use of Colorado River and Lake Pleasant water. For example, Total Aluminum downstream of HSY is highest in March - May as sediments are re-suspended when pumps are started. A complete table of priority constituent values measured monthly at each sample site is included in Appendix A.

Of the 178 constituents listed in Table A-2 of the Guidance Document, just five were detected in the CAP system in 2024. Those contaminants are listed in the table on Page 10, followed by a short description of the contaminant and its potential source.

The contracted laboratories also include nearly 85 additional contaminants and naturally occurring substances in semi-annual analyses. These substances are not included in the Guidance Document, but can be detected with the applied testing methods. In 2024, just one "exotic" contaminant (Dimethyl phthalate) was detected. It is included in the list on Page 10, as well as a description on Page 11.

SYSTEM-WIDE RANGES AND AVERAGES

2024 SUMMARY OF PRIORITY CONSTITUENTS

Constituent	Units	MRL	2024 Range	2024 Average[1]	CAP 5-Yr Average (2019-2023)
Field Measurements					
Dissolved Oxygen	mg/L		1.88 - 11.57	8.93	9.21
pH	Units		6.76 - 8.75	7.99	8.05
Specific Conductance[2]	µS/cm		940 - 1119	1009.82	925.59
Temperature	°F		48.3 - 88.3	67.76	66.93
Laboratory Results					
Alkalinity	mg/L	2	98 - 140	123.99	125.18
Aluminum (Dissolved)	mg/L	20	Non-Detect	Non-Detect	9.04
Aluminum (Total)	µg/L	20	ND - 520	66.39	86.52
Ammonia Nitrogen	mg/L	0.05	ND - 0.23	0.04	0.04
Antimony (Total)	µg/L	1	Non-Detect	Non-Detect	Non-Detect
Arsenic (Total)	µg/L	1	ND - 4.8	2.48	2.78
Barium (Total)	µg/L	2	110 - 170	138.81	118.52
Beryllium (Total)	µg/L	1	Non-Detect	Non-Detect	Non-Detect
Boron (Total)	mg/L	0.05	0.073 - 0.16	0.14	0.13
Bromide	µg/L	5	85 - 130	98.92	85.99
Cadmium (Total)	µg/L	0.5	Non-Detect	Non-Detect	Non-Detect
Calcium (Total)	mg/L	1	57 - 85	72.02	69.76
Chloride	mg/L	2.5	98 - 120	106.82	95.42
Chromium (Total)	µg/L	1	ND - 1.1	0.51	0.62
Cobalt (Total)	µg/L	2	Non-Detect	Non-Detect	1.01
Copper (Dissolved)	µg/L	2	Non-Detect	Non-Detect	1.05
Fluoride	mg/L	0.05	0.32 - 0.42	0.37	0.34
Gross Alpha	pCi/L	3	ND - 9.81	4.12	3.35
Gross Beta	pCi/L	4	ND - 8.25	4.22	5.61
Hexavalent Chromium	µg/L	0.02	ND - 0.042	0.02	0.04
Iron (Dissolved)	mg/L	0.01	ND - 0.025	0.01	0.01
Lead (Total)	µg/L	0.5	ND - 0.86	0.26	0.28
Manganese (Total)	µg/L	2	ND - 170	8.68	6.75

1 Non-Detect values are calculated as half of the MRL; average values include the non-detect value
2 Not included as part of the 10/26/20 DRAFT Guidance Document

RANGES AND AVERAGES (CONTINUED)

Constituent	Units	MRL	2024 Range	2024 Average	CAP 5-Yr Average (2019-2023)
Laboratory Results (cont.)					
Mercury	µg/L	0.2	Non-Detect	Non-Detect	Non-Detect
Molybenum (Total)	ug/L	2	ND - 6.3	5.18	4.69
Nickel (Total)	µg/L	5	Non-Detect	Non-Detect	Non-Detect
Nitrate	mg/L	0.25	ND - 0.54	0.26	Non-Detect
Nitrite	mg/L	0.25	Non-Detect	Non-Detect	Non-Detect
Perchlorate	µg/L	2	ND - 3.8	1.06	1.33
Potassium (Total)	mg/L	1	4.5 - 6.3	5.60	5.06
Radium 226/228	pCi/L	2	ND - 3.23	1.03	Non-Detect
Selenium (Total)	µg/L	5	Non-Detect	Non-Detect	Non-Detect
Silver (Total)	µg/L	0.5	Non-Detect	Non-Detect	Non-Detect
Sodium (Total)	mg/L	1	85 - 110	96.16	90.12
Strontium (Total)	mg/L	0.01	0.95 - 1.3	1.12	1.04
Sulfate	mg/L	1.3	230 - 260	241.31	220.90
Thallium (Total)	µg/L	1	Non-Detect	Non-Detect	Non-Detect
Total Dissolved Solids	mg/L	20	600 - 720	655.71	600.28
Total Organic Carbon	mg/L	0.3	2.8 - 4.7	3.26	3.32
Total Phosphorus as P	mg/L	0.02	Non-Detect	Non-Detect	0.02
Turbidity	NTU	0.1	ND - 25	2.36	2.10
Uranium	µg/L	1	ND - 5.6	4.52	4.11
Vanadium (Total)	µg/L	3	ND - 3.9	1.91	2.12
Zinc (Total)	µg/L	20	ND - 27	10.20	Non-Detect

DETECTED CONTAMINANTS

Constituent	Location	Month	Value	Units	MRL	Source of Contamination
2,4-D						**Agricultural/Residential runoff**
	San Xavier	Nov	0.39	µg/L	0.1	
Perfluorobutanesulfonic acid (PFBS)						**Industrial processes**
	Lake Pleasant Parkway	Nov	3.9	ng/L	2	
Formaldehyde						**Rain water, naturally occurring**
	San Xavier	May	13	µg/L	5.2	
E. coli (Present)						**Fecal transfer**
	All Sites	May, November				
Total Coliform						**Occurs naturally, Fecal transfer**
	All Sites	May, November				
Dimethyl phthalate (Exotic)						**Industrial processes**
	Lake Pleasant	May, November				

DESCRIPTION OF DETECTED CONTAMINANTS

REGULATED CONTAMINANTS

2,4-D is one of the most common weed killers in the U.S. It was developed in the 1940's and is widely used in agriculture, as well as a backyard lawn treatment. It attacks the roots and leaves of weeds by making plant cells grow out of control. Although it was once thought to be safe, it is now considered a possible human carcinogen. It is an EPA regulated contaminant, but was detected in low levels at only one location in 2024. Because 2,4-D was only detected in the southern part of the system (San Xavier Pumping Plant), it likely entered the system through agricultural runoff.

UNREGULATED CONTAMINANTS

Perfluorobutanesulfonic acid (PFBS) is a xenobiotic (foreign to an ecological system) and an environmental contaminant. It is part of the PFAS group that are man-made chemicals used in a variety of industries around the globe. Recently, PFAS have been identified as causing adverse human health effects. PFBS is a replacement compound for PFOS and is most widely used in stain repellents. In April 2024, the EPA established MCL's for six PFAS, which included PFBS (within a hazard index). In November, PFBS was detected in very low levels at Lake Pleasant Parkway. Since PFBS (and all other PFAS) have not been detected in MWP samples, this detection likely originated in Lake Pleasant rather than the Colorado River.

Formaldehyde is a gaseous pollutant produced by both human activity (combustion processes and manufacturing) and natural sources (small amounts produced by plants and animals). It is rarely found in surface waters, but may be present in rain water or after release of formaldehyde-based products. It breaks down very quickly in water. The single detection in May at San Xavier is likely an anomaly as a result of rain or runoff.

EXOTICS

Dimethyl phthalate is a colorless, oily liquid that is used in rocket propellants, plastics, and insect repellents. Although it has moderate toxicity, it is not regulated by the EPA. Dimethyl phthalate was detected in both May and November in Lake Pleasant, likely as a product of recreational activities (insect repellent).

MICROBIOLOGY

E.coli is a bacterium commonly found in the intestines of humans and animals. It typically does not cause harm to humans, although some strains can cause illness. It is most easily transferred through fecal matter. Detections at Lake Havasu, Lake Pleasant, and Lake Pleasant Parkway suggest that the reservoirs are a source of contamination, while detection at San Xavier may be related to runoff from areas holding livestock.

Total Coliform is a measurement of the coliform bacteria in a water source. Coliform bacteria occur naturally in soils, water, vegetation, and in the intestines of warm-blooded organisms. Most are harmless to humans, although some micro-organisms can cause illnesses. Due to the widespread distribution of coliform bacteria, detections in surface water samples are expected.

LAKE PLEASANT OPERATIONS

The CAP System utilizes Lake Pleasant as a seasonal pump-storage reservoir. During a typical year, Colorado River water is pumped into the reservoir from October to May when water demands and electricity costs are lower. During the summer, when water demands and electricity costs are higher, water is released from the reservoir for customer deliveries. These annual water level fluctuations may be modified based on required maintenance of the system, as well as stakeholder demand, which can vary based on rainfall and air temperature.

In 2024, typical pumping and releasing (generating) occurred during spring, as river water was used to meet stakeholder demand and fill Lake Pleasant through the end of May, then Lake Pleasant was utilized as the primary source from June through September. From September through mid-December, river water used almost exclusively to meet demand, which was reduced due to conservation efforts. In late December, releases from Lake Pleasant were made to balance river diversions.

In recent years, a more gradual transition from Lake Pleasant to Colorado River water was employed in early September to minimize impacts caused by the re-suspension of sediments. This approach continued in 2024 and continues to be effective in reducing downstream turbidity and total organic carbon levels during the fall.

The average, minimum, and maximum lake elevations in 2024 were its lowest in the past 5 years. However, the elevation change throughout the year was less than experienced in previous years. The high water level of 1,692.86 occurred on May 31st, while the low water level of 1,661.79 occurred on December 31st. January 1st. Additionally, the 2024 average water elevation of 1674.87 was over five feet lower than the 2019-2023 annual average.

2024 Lake Pleasant Operations	
Average Water Elevation	1,674.87 (ft)
Highest Water Elevation (05/31/24)	1,692.86 (ft)
Lowest Water Elevation (12/31/24)	1,661.79(ft)
Change in Elevation:	31.07 (ft)

Lake Pleasant average daily inflow/outflow (cfs) and lake elevation (feet). Positive levels represent when water is pumped into Lake Pleasant from the CAP (pumping), while negative values represent when water is discharged from Lake Pleasant into the CAP canal (generating).

LAKE PLEASANT WATER QUALITY

From 1996-2022, CAP sampled water quality every quarter at a single site near the intake towers at Waddell Dam. This sampling included most of the constituents listed in tables A-1 and A-2 in the Water Quality Guidance Document. Beginning in 2023, sampling at the Towers was reduced to a semi-annual frequency due to the high number of non-detect results.

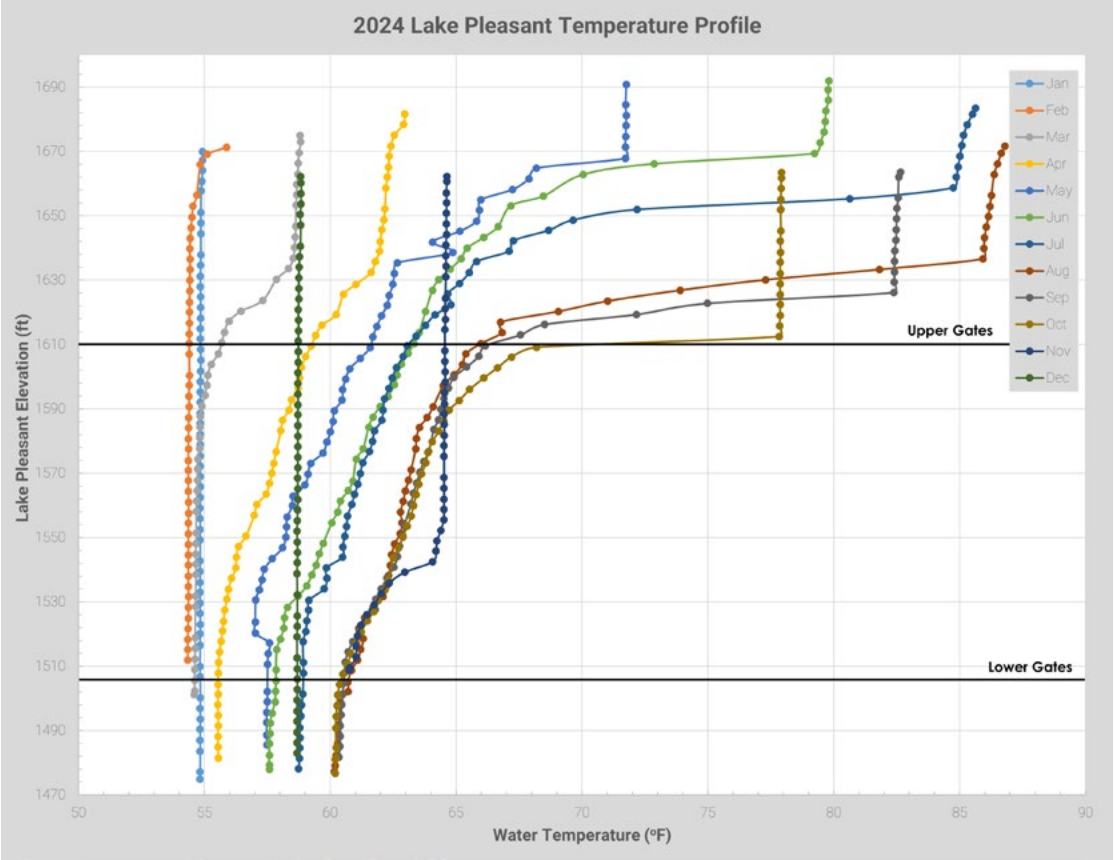
However, CAP began sampling three sites each month in Lake Pleasant for 16 nutrient-related constituents (see Appendix A). During winter, samples were collected at the metalimnion (~45 feet), while during thermal stratification (May - October), additional samples were take at the surface (epilimnion) and at ~90 feet (hypolimnion). These samples allow for CAP to use water quality modeling to gain a better understanding of the nutrient dynamics in the lake and how they affect the canal. Vertical profiles were also measured at each of these three sites, as well as two additional sites in the Agua Fria River and Castle Creek.

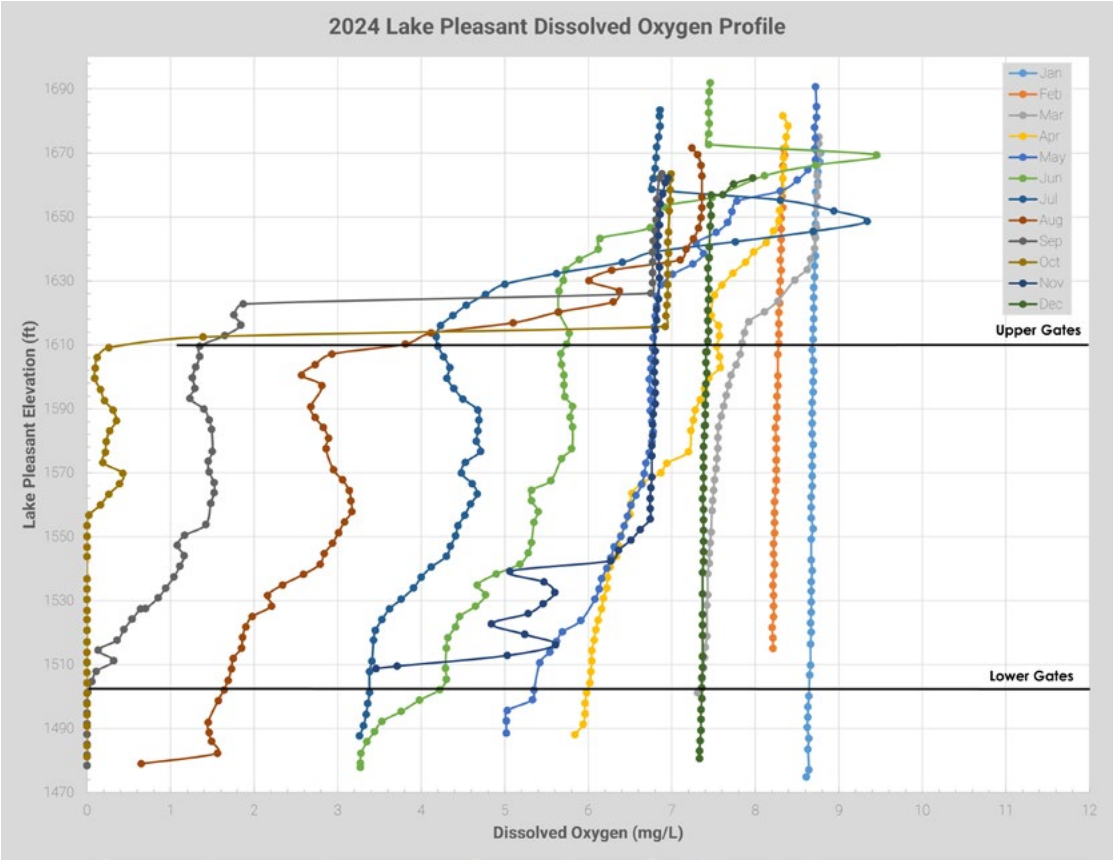
Water quality among the three sites and at the various depths was very similar with few exceptions:

- Nitrates were highest at the deepest sampling points, while TDS, TOC, and DOC were highest at points nearest the surface.
- TDS and TOC varied slightly at each site, but was not consistently higher at any one site.
- Ammonia nitrogen, nitrites, and phosphorus were rarely detected in samples.
- Secchi depths (visibility into the water column) were nearly the same at the three lake sites, but was almost always highest at the Towers site.

A slight thermocline began to develop in March, but was most evident by May at about 25 feet below the water surface. The thermocline continued to move to lower depths throughout the summer months, eventually reaching about 80 feet in November (see monthly profiles, Page 14). In October, the thermocline was at just over 50 feet and the temperature changed by 9.5 degrees in just 3 feet (1 meter). In December, the cooler air temperatues allowed the lake to completely mix (no thermocline). An oxygen deficit (0 mg/L) was experienced in September and October.

LP TOWERS MONTHLY PROFILES





ALAMO DAM RELEASES

Releases from Alamo Dam often create a degradation of water quality in both the Bill Williams River and in the southernmost portions of Lake Havasu. Due to the proximity of the CAP intakes to the Bill Williams River, this degradation of water quality can have significant impacts to the CAP system and its stakeholders. During past events, the increase in suspended sediments transported into the CAP System has resulted in increased maintenance to critical infrastructure, clogging of recharge basins, and an increase in costs related to operational changes. For CAP stakeholders, past high flow events have led to increased maintenance frequency and costs, as well as increases in treatment costs related to high turbidity, total organic carbon (TOC) and alkalinity.

In 2024, the US Army Corps of Engineers periodically released water from Alamo Lake to facilitate maintenance activities; however, none of the releases were significant enough to reach Lake Havasu.

WATER CONTROL MANUAL

The Corps, who constructed and operate Alamo Dam, continue to work on an update to their Water Control Manual. The Manual details the operation of Alamo Dam, specifies frequency of dam maintenance, and outlines conditions for releases of water from the dam. Release of the DRAFT manual has been delayed for several years, but is expected to be available for public comment at some point in 2025, with a final release date later in the year.

SALINITY CONTROL PROGRAM

The Colorado River provides domestic and industrial water to approximately 27 million people in the western United States and is used to irrigate approximately 4 million acres of land. However, salinity levels in the river water have historically been high, which can reduce crop yields, limit the choice of crops that can be grown, make the land unsuitable for agricultural purposes, and kill riparian vegetation.

In 1975, the seven Colorado River Basin states adopted a salinity standard for the Colorado River. That standard, which was approved by the EPA, is composed of numeric criteria for total dissolved solids (TDS) and a plan of implementation to meet the criteria. Since the program's implementation, salinity in the river has been reduced by approximately 100 mg/L. For CAP stakeholders, this translates to approximately 220,000 tons of salt that did not enter the CAP service area.

CAWCD participates with Arizona and the other Basin States and Federal Agencies in the implementation of the Program. CAWCD also works with the Colorado River Basin Salinity Control Forum and the Forum's technical workgroup to address funding and other issues associated with program implementation.

GROUNDWATER RECHARGE

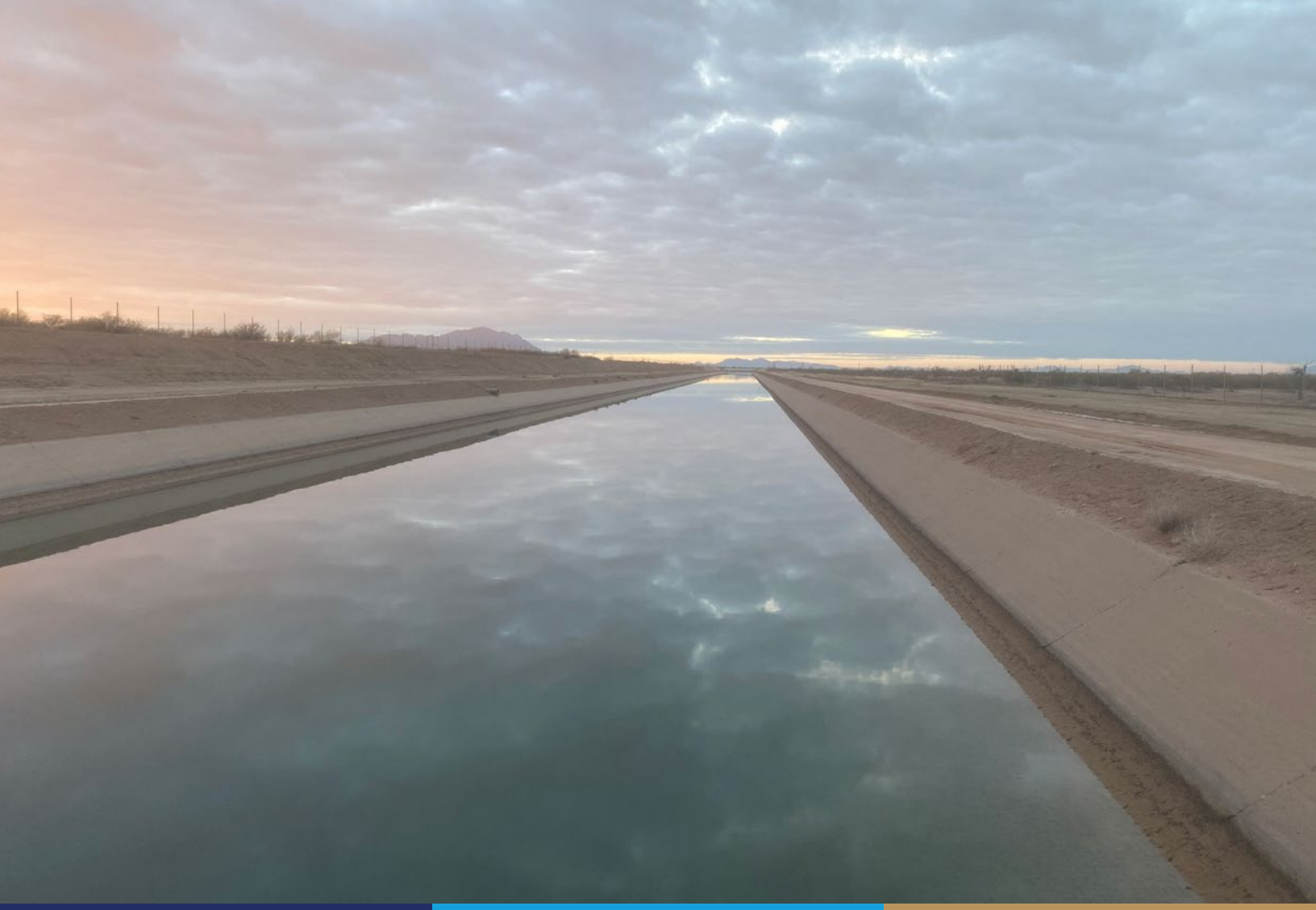
CAWCD has developed and currently operates six recharge projects:

1. Pima Mine Road Recharge Project
2. Lower Santa Cruz Recharge Project
3. Agua Fria Recharge Project
4. Hieroglyphic Mountain Recharge Project
5. Tonopah Desert Recharge Project
6. Superstition Mountains Recharge Project

The Tucson Active Management Area (AMA) recharge facilities have a cumulative operational capacity of 58,500 acre-feet per year and include the Pima Mine Road and Lower Santa Cruz Recharge Projects. In the Phoenix AMA, there are four facilities: the Tonopah Desert, Hieroglyphic Mountains, Agua Fria, and Superstition Mountains Recharge Projects, with a combined annual operational capacity of 233,000 acre-feet.

A portion of the permitting process and regulatory compliance for these projects requires periodic water quality monitoring. The sampling results are compiled into an annual report, which is a matter of public record and is submitted to the Arizona Department of Water Resources. Copies of the reports, or portions of the reports, are available by contacting:

Bryant Dickens
CAP Water Transmission Department
(623) 869-2255
bdickens@cap-az.com



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APPENDIX A.
WATER QUALITY TABLES

LAKE HAVASU 2024 (MARK WILMER PUMPING PLANT)

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Field Measurements													
Dissolved Oxygen	mg/L	10.49	10.32	9.46	9.77	8.69	8.16	8.84	8.76	7.4	7.38	8.91	9.5
pH	Units	8.66	8.06	8.11	8.2	8.19	8.05	8.29	8.31	8.1	8.29	8.03	7.82
Conductivity	uS/cm	1119	1062	1052	1047	1033	1012	1010	991	984	972	959	959
Temperature	degF	52.29	58.2	61.1	63.9	71.6	78	86.5	84.1	80.2	74.7	60.6	57
Primary Analytes													
Alkalinity	mg/L	130	130	130	130	130	130	130	130	130	130	130	130
Aluminum (Dissolved)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum (Total)	ug/L	100	63	220	220	82	40	ND	38	130	180	270	160
Ammonia Nitrogen	mg/L	ND	ND	ND	ND	ND	ND	ND	0.065	ND	ND	ND	ND
Antimony (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic (Total)	ug/L	2.2	2	2.1	2.2	2.5	2.5	ND	3	3	2.8	2	2.2
Barium (Total)	ug/L	160	160	170	140	150	150	120	140	150	140	140	130
Beryllium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Boron (Total)	mg/L	0.15	0.15	0.15	0.13	0.15	0.14	0.14	0.11	0.13	0.13	0.13	0.13
Bromide	ug/L	100	110	100	98	95	110	95	91	89	87	85	94
Cadmium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium (Total)	mg/L	76	80	79	70	85	77	74	71	71	72	75	76
Chloride	mg/L	120	120	110	110	110	100	98	99	99	100	99	110
Chromium (Total)	ug/L	ND	ND	ND	ND	1.1	ND	ND	ND	ND	ND	ND	ND
Cobalt (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper (Dissolved)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoride	mg/L	0.37	0.42	0.38	0.36	0.37	0.36	0.35	0.33	0.33	0.33	0.35	0.34
Gross Alpha	pCi/L	4.73	7.2	5.02	4.8	6.76	ND	4.66	4.62	5.05	3.59	ND	4.71
Gross Beta	pCi/L	ND	ND	ND	6.01	4.59	ND	4.76	ND	4.04	ND	4.72	4.69
Hexavalent Chromium	ug/L	0.023	0.026	0.026	0.036	0.037	0.036	0.03	0.027	0.021	0.025	0.027	ND
Iron (Dissolved)	mg/L	0.018	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese (Total)	ug/L	5.4	4	9.4	9	5	6.9	4.1	8.2	10	12	13	6.9
Mercury	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Molybdenum (Total)	ug/L	5.6	5.5	5.4	5	5.4	5.2	4.5	5.1	5.5	4.9	5.1	5.3
Nickel (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate	mg/L	0.37	0.38	0.41	0.54	0.53	0.46	0.32	ND	0.29	0.29	0.32	0.37
Nitrite	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium (Total)	mg/L	5.3	5.7	5.8	5.1	6	5.6	5.5	5.4	5.3	5	5.3	5.1
Radium 226/228	pCi/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

LAKE HAVASU 2024 (CONTINUED)

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Silver (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium (Total)	mg/L	99	100	100	87	100	94	92	89	88	92	91	89
Strontium (Total)	mg/L	1.2	1.2	1.2	1	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.2
Sulfate	mg/L	260	250	250	250	240	240	240	230	230	230	230	240
Thallium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Dissolved Solids	mg/L	710	710	710	670	660	650	650	630	650	620	640	640
Total Organic Carbon	mg/L	2.9	2.9	3	2.9	3	3.4	3.4	3.3	3.1	2.9	3.1	2.9
Total Phosphorus	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Turbidity	NTU	5.6	1.8	5.3	5	1.7	1.4	1.8	1.9	3.3	4.5	7.8	4.2
Uranium	ug/L	4.4	4.9	5	4.6	4.6	4.7	3.3	4.2	4.6	4.4	4.7	4.4
Vanadium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.4	ND	ND
Zinc (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

HASSAYAMPA PUMPING PLANT 2024

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Field Measurements													
Dissolved Oxygen	mg/L	11.35	11.29	9.58	9.86	8.97	9.01	11.43	9.46	8.9	8.13	9.55	10.36
pH	Units	8.39	8.22	8.06	7.86	8	8.1	8.48	8.12	7.74	7.57	7.86	7.97
Conductivity	uS/cm	1061	1051	1052	1040	1043	1028	1000	996	983	985	955	952
Temperature	degF	50	53.9	60.1	63.3	71.2	79.7	88.3	88.1	83.2	79.2	63	57
Primary Analytes													
Alkalinity	mg/L	130	130	130	130	130	130	99	98	120	130	120	130
Aluminum (Dissolved)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum (Total)	ug/L	ND	20	520	130	180	21	ND	ND	ND	37	ND	ND
Ammonia Nitrogen	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic (Total)	ug/L	1.9	2.2	2.3	2.4	2.4	2.4	2.6	3.2	2.8	2.5	2.3	2.4
Barium (Total)	ug/L	140	150	150	150	150	140	130	130	140	140	140	140
Beryllium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Boron (Total)	mg/L	0.16	0.15	0.13	0.14	0.14	0.14	0.15	0.13	0.073	0.14	0.14	0.12
Bromide	ug/L	110	100	100	92	92	92	100	92	86	92	87	88
Cadmium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium (Total)	mg/L	79	76	74	81	78	73	68	57	66	72	75	67
Chloride	mg/L	120	110	110	110	110	110	110	110	100	99	100	100
Chromium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper (Dissolved)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoride	mg/L	0.39	0.37	0.39	0.37	0.36	0.35	0.35	0.35	0.32	0.34	0.34	0.34
Gross Alpha	pCi/L	3.07	ND	3.51	9.81	7.27	ND	3.14	ND	5.43	5.3	4.7	ND
Gross Beta	pCi/L	ND	4.99	4.87	6.19	5.11	4.04	5.11	4.61	4.12	4.26	5.08	ND
Hexavalent Chromium	ug/L	0.023	0.02	0.025	0.031	0.036	0.033	0.02	0.025	ND	0.034	ND	0.029
Iron (Dissolved)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead (Total)	ug/L	ND	ND	0.67	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese (Total)	ug/L	ND	ND	19	10	9	3.1	2.6	3.8	ND	3.2	ND	ND
Mercury	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Molybdenum (Total)	ug/L	5.2	5.3	5.1	5.2	5.3	5.1	5.3	5.4	5.3	5.3	5.2	5.3
Nickel (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate	mg/L	0.3	0.31	0.4	0.51	0.51	0.41	ND	ND	ND	ND	0.25	0.28
Nitrite	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/L	ND	ND	ND	ND	2.3	ND	ND	ND	ND	ND	0.92	0.85
Potassium (Total)	mg/L	5.7	5.5	5.2	5.8	5.6	5.4	6.1	5.6	5.3	5.8	5.5	4.5
Radium 226/228	pCi/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium (Total)	mg/L	100	99	92	99	97	92	100	89	87	93	95	85

HASSAYAMPA 2024 (CONTINUED)

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strontium (Total)	mg/L	1.2	1.2	1.1	1.2	1.2	1.1	1.2	1	1	1.1	1.1	1.1
Sulfate	mg/L	260	250	250	240	240	240	250	250	230	230	230	230
Thallium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Dissolved Solids	mg/L	700	710	680	660	670	670	630	620	620	620	620	620
Total Organic Carbon	mg/L	2.9	2.9	3.1	2.9	3.1	3.4	4.4	4.7	3.4	3.3	3.2	3.1
Total Phosphorus	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Turbidity	NTU	0.5	0.6	19	8.6	5.2	1	0.55	0.55	0.3	ND	0.4	0.35
Uranium	ug/L	4.8	4.3	4.5	4.9	4.7	4.4	4.5	4.2	4.6	4.5	4.3	4.7
Vanadium (Total)	ug/L	ND	ND	3.4	ND	3.7	3.1	ND	ND	ND	ND	3.4	ND
Zinc (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

WADDELL PUMPING PLANT 2024

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Field Measurements													
Dissolved Oxygen	mg/L	9.76	10.47	9.4	9.99	9.13	6.45	4.79	3.11	1.88	3.61	7.71	7.91
pH	Units	7.03	7.98	8	8.03	8.2	6.76	7.3	7.06	7.18	7.38	7.03	8
Conductivity	uS/cm	958	1047	1057	1046	1037	1045	967	979	967	954	960	1060
Temperature	degF	56.8	57.5	60.4	65.3	71.4	78.6	61	63.6	64	78.2	63.7	55.7
Primary Analytes													
Alkalinity	mg/L	120	130	130	130	130	130	130	130	130	140	140	130
Aluminum (Dissolved)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum (Total)	ug/L	ND	99	480	330	130	ND	34	ND	ND	ND	ND	ND
Ammonia Nitrogen	mg/L	ND	ND	ND	ND	ND	0.19	ND	ND	ND	0.23	0.16	0.18
Antimony (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic (Total)	ug/L	2.5	2.2	2.4	2.6	2.5	2.8	2.7	2.8	3.4	4.1	4.8	3.4
Barium (Total)	ug/L	130	150	160	150	150	130	120	120	130	120	120	130
Beryllium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Boron (Total)	mg/L	0.15	0.15	0.13	0.14	0.14	0.14	0.15	0.14	0.082	0.15	0.16	0.15
Bromide	ug/L	100	100	100	95	96	94	120	110	110	120	120	120
Cadmium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium (Total)	mg/L	74	78	75	79	76	73	67	71	65	69	75	74
Chloride	mg/L	120	120	110	110	110	110	100	100	100	100	110	110
Chromium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper (Dissolved)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoride	mg/L	0.36	0.38	0.39	0.39	0.38	0.34	0.41	0.4	0.39	0.39	0.41	0.4
Gross Alpha	pCi/L	5.16	3.49	5.35	3.76	5.73	3.76	ND	3.31	3.71	ND	ND	ND
Gross Beta	pCi/L	5.68	ND	ND	4.9	6.28	ND	4.22	ND	4.72	4.95	4.86	4.12
Hexavalent Chromium	ug/L	0.038	ND	0.024	0.028	0.037	0.029	ND	0.025	ND	0.035	ND	0.027
Iron (Dissolved)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead (Total)	ug/L	ND	ND	0.86	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese (Total)	ug/L	5.3	7.3	27	15	7	7	10	9.9	33	49	170	18
Mercury	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Molybdenum (Total)	ug/L	5.1	5.3	4.8	5.1	5.4	4.8	5	5	5.3	5.3	5.2	5.2
Nickel (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate	mg/L	ND	0.26	0.4	0.49	0.51	0.38	ND	0.26	0.26	ND	ND	ND
Nitrite	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium (Total)	mg/L	5.6	5.7	5.1	5.4	5.6	5.7	5.7	5.6	5.5	6	6	6.1
Radium 226/228	pCi/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium (Total)	mg/L	100	100	91	95	95	95	94	93	88	96	100	100

WADDELL 2024 (CONTINUED)

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strontium (Total)	mg/L	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1	1.1	1.1	1
Sulfate	mg/L	250	250	250	250	240	240	230	230	230	230	230	240
Thallium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Dissolved Solids	mg/L	660	690	680	680	690	670	640	640	630	640	640	670
Total Organic Carbon	mg/L	3	3	3.4	3.2	3.1	3.6	3.1	3	3	3.4	3.4	3.2
Total Phosphorus	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Turbidity	NTU	0.25	4.1	25	7.8	5.8	0.65	1.4	0.9	0.55	ND	0.35	0.45
Uranium	ug/L	4.7	4.7	4.6	4.9	4.6	4	4.4	4.3	4.4	4.3	4	4.7
Vanadium (Total)	ug/L	ND	ND	3.9	3.1	3.3	ND	3	ND	ND	ND	ND	ND
Zinc (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

LAKE PLEASANT PARKWAY 2024

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Field Measurements													
Dissolved Oxygen	mg/L	11.07	10.3	9.97	8.25	9.27	6.44	6.73	4.12	7.57	8.09	9.3	10.87
pH	Units	8.02	8.11	8.12	8.24	8.12	7.48	7.75	7.33	7.95	8.08	7.63	8.04
Conductivity	uS/cm	1055	1055	1053	1047	1039	977	977	980	994	983	954	950
Temperature	degF	53.6	56.5	61.6	67	71.6	67.8	63.4	63.3	81	78.4	64.5	52.9
Primary Analytes													
Alkalinity	mg/L	130	130	130	130	130	130	130	130	120	120	120	120
Aluminum (Dissolved)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum (Total)	ug/L	ND	ND	160	110	130	40	29	29	ND	27	ND	ND
Ammonia Nitrogen	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic (Total)	ug/L	1.8	2.1	2.1	2.2	2.3	3.2	2.9	3.2	2.6	2.8	2.5	2.2
Barium (Total)	ug/L	140	150	160	150	150	130	130	120	140	150	130	140
Beryllium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Boron (Total)	mg/L	0.15	0.15	0.15	0.16	0.15	0.14	0.15	0.14	0.13	0.14	0.13	0.12
Bromide	ug/L	110	110	100	92	92	130	110	110	90	91	86	90
Cadmium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium (Total)	mg/L	77	75	79	85	80	72	68	69	67	73	71	69
Chloride	mg/L	120	120	110	110	110	100	100	100	100	100	100	100
Chromium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper (Dissolved)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoride	mg/L	0.39	0.38	0.36	0.36	0.36	0.35	0.39	0.41	0.35	0.34	0.34	0.35
Gross Alpha	pCi/L	6.91	ND	5.28	8.53	4.69	ND	4.03	5.6	ND	3.56	ND	4.3
Gross Beta	pCi/L	6.37	ND	5.19	4.57	5.37	ND	4.6	6.45	5.33	5.84	4.67	4.4
Hexavalent Chromium	ug/L	0.022	ND	0.029	0.031	0.041	0.024	0.025	ND	ND	0.024	ND	ND
Iron (Dissolved)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese (Total)	ug/L	ND	ND	6.5	5.7	6.9	12	8	9.9	3.8	2.5	ND	ND
Mercury	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Molybdenum (Total)	ug/L	5.2	5.4	5.3	5.7	5.3	4.7	5.3	4.7	5.6	5.2	5.1	5.2
Nickel (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4
Nitrate	mg/L	0.26	0.26	0.37	0.52	0.53	0.25	0.19	ND	ND	ND	0.25	0.28
Nitrite	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/L	ND	ND	ND	ND	3.8	ND	ND	ND	ND	ND	0.85	0.93
Potassium (Total)	mg/L	5.7	5.6	5.9	6.3	5.9	5.6	5.9	5.8	5.5	5.8	5.4	4.8
Radium 226/228	pCi/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Silver (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium (Total)	mg/L	100	100	100	110	100	94	95	95	90	94	91	91

LAKE PLEASANT PARKWAY 2024 (CONT)

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strontium (Total)	mg/L	1.2	1.2	1.2	1.3	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Sulfate	mg/L	260	250	250	250	250	230	230	230	240	230	230	230
Thallium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Dissolved Solids	mg/L	690	690	710	670	670	630	630	640	630	630	630	630
Total Organic Carbon	mg/L	3	2.9	2.9	3	3.2	3.6	3.2	3.1	3.5	3.1	3.2	2.8
Total Phosphorus	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Turbidity	NTU	0.45	1.4	4.6	2.6	4.4	1.5	1.2	1.2	0.6	0.75	0.3	0.25
Uranium	ug/L	4.9	4.8	4.9	4.6	4.7	4.4	4.4	4.2	4.5	4.7	4.3	5
Vanadium (Total)	ug/L	ND	ND	ND	ND	3	ND	ND	ND	ND	ND	3.1	2.5
Zinc (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ROOSEVELT WCD 2024

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Field Measurements													
Dissolved Oxygen	mg/L	11.57	10.89	9.2	9.86	9.33	9.46	8.99	7.84	7.59	8.15	9.98	10.6
pH	Units	8.7	8.33	8.14	8.01	8.27	8.12	7.72	7.96	7.49	8.15	7.77	8.27
Conductivity	uS/cm	1096	1043	1056	1046	1032	1025	976	977	988	984	940	949
Temperature	degF	50.34	55.8	63.2	66.3	76.9	81	69.7	74.9	77	78.6	59.6	54
Primary Analytes													
Alkalinity	mg/L	120	130	130	130	130	120	120	120	120	120	120	120
Aluminum (Dissolved)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum (Total)	ug/L	ND	ND	180	130	67	43	49	89	61	ND	ND	ND
Ammonia Nitrogen	mg/L	ND	ND	ND	ND	0.17	ND	ND	ND	ND	ND	ND	ND
Antimony (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic (Total)	ug/L	1.9	1.8	2.2	2.4	2.4	2.5	2.7	3.3	3.1	ND	2.5	2.2
Barium (Total)	ug/L	140	140	160	150	150	150	120	120	130	140	140	140
Beryllium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Boron (Total)	mg/L	0.16	0.14	0.16	0.15	0.13	0.13	0.14	0.13	0.15	0.14	0.13	0.12
Bromide	ug/L	100	100	100	93	85	110	110	100	96	93	85	91
Cadmium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium (Total)	mg/L	75	72	83	80	70	72	65	60	67	72	68	72
Chloride	mg/L	110	110	110	110	110	100	100	110	100	100	99	100
Chromium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper (Dissolved)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoride	mg/L	0.37	0.37	0.36	0.38	0.4	0.33	0.38	0.39	0.36	0.35	0.35	0.35
Gross Alpha	pCi/L	6.32	5.19	5.57	6.11	7.03	5.11	ND	3.47	4.7	3.6	3.43	3.84
Gross Beta	pCi/L	4.95	4.27	4.57	5	5.79	ND	6.21	5.81	4.29	6.91	ND	4.92
Hexavalent Chromium	ug/L	ND	ND	0.023	0.029	0.034	0.029	0.029	ND	ND	ND	ND	ND
Iron (Dissolved)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese (Total)	ug/L	ND	2.1	8.2	7	4.2	3.8	7.2	11	14	ND	ND	ND
Mercury	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Molybdenum (Total)	ug/L	4.9	4.8	5.4	5.4	5.4	4.8	5.1	5.3	5.4	ND	5.5	5
Nickel (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2
Nitrate	mg/L	0.19	0.28	0.37	0.46	0.45	0.34	ND	0.12	ND	ND	0.21	0.26
Nitrite	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.88	0.89
Potassium (Total)	mg/L	5.9	5.3	6.2	5.7	5.6	5.3	5.7	5.7	5.6	5.8	5.3	5.1
Radium 226/228	pCi/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium (Total)	mg/L	110	99	110	100	95	90	92	86	94	95	90	96

ROOSEVELT WCD 2024 (CONTINUED)

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strontium (Total)	mg/L	1.2	1.1	1.3	1.2	1.1	1.1	1	0.96	1.1	1.1	1.1	1.1
Sulfate	mg/L	250	250	250	250	250	240	230	230	240	230	230	230
Thallium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Dissolved Solids	mg/L	690	680	720	650	670	650	640	630	620	640	640	640
Total Organic Carbon	mg/L	3.1	2.9	3.1	3.1	3.3	3.7	3.7	3.8	3.4	3.1	3	2.8
Total Phosphorus	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Turbidity	NTU	0.5	0.5	7.8	5.4	2.2	1.9	1.5	2.3	0.65	0.45	0.2	0.25
Uranium	ug/L	4.5	3.9	4.9	5	4.6	4.5	4.3	4.1	4.4	ND	4.8	4.8
Vanadium (Total)	ug/L	ND	ND	ND	ND	3.6	ND	ND	ND	3	ND	ND	2.5
Zinc (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

BRADY PUMPING PLANT 2024

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Field Measurements													
Dissolved Oxygen	mg/L	11.13	10.09	9.46	9.57	10.05	9.75	8.47	8.15	8.79	9.51	9.69	10.92
pH	Units	8.59	8.05	8.18	8.03	8.1	8.01	7.99	7.79	7.96	8.25	7.71	8.32
Conductivity	uS/cm	1103	1042	1049	1018	1028	1004	981	980	990	966	940	940
Temperature	degF	49.77	63.5	63.8	76.2	76.2	84.2	81.5	78.8	80	72.8	63.1	53.9
Primary Analytes													
Alkalinity	mg/L	120	120	130	130	120	120	120	130	120	110	100	110
Aluminum (Dissolved)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum (Total)	ug/L	38	23	30	32	26	ND	ND	ND	ND	ND	ND	ND
Ammonia Nitrogen	mg/L	0.073	ND	ND	ND	ND	ND	ND	ND	0.053	0.12	0.17	0.051
Antimony (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic (Total)	ug/L	2	1.7	2.1	2	2.4	2.5	3.3	3.1	3.2	1.7	2.5	2.2
Barium (Total)	ug/L	150	140	140	150	140	140	110	120	140	130	130	130
Beryllium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Boron (Total)	mg/L	0.15	0.16	0.14	0.14	0.13	0.14	0.14	0.12	0.14	0.14	0.14	0.12
Bromide	ug/L	100	110	100	96	85	96	100	100	90	91	96	88
Cadmium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium (Total)	mg/L	73	78	74	80	69	71	66	63	66	67	65	65
Chloride	mg/L	110	110	110	110	110	100	100	100	100	110	110	100
Chromium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper (Dissolved)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoride	mg/L	0.41	0.4	0.38	0.37	0.39	0.34	0.39	0.4	0.33	0.34	0.34	0.35
Gross Alpha	pCi/L	ND	4.8	3.32	4.4	4.89	5.18	3.49	4.84	ND	3.35	5.11	ND
Gross Beta	pCi/L	4.06	ND	4.72	4.04	8.25	ND	4.18	4.97	ND	5.78	5.92	6.32
Hexavalent Chromium	ug/L	ND	0.02	0.023	0.023	0.026	0.037	0.029	ND	0.022	ND	ND	0.025
Iron (Dissolved)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese (Total)	ug/L	2.9	2.8	2.6	2.4	3.1	2.1	7.5	4.2	8.7	4.8	2.4	2.1
Mercury	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Molybdenum (Total)	ug/L	5.3	5.1	5.1	5.3	5.4	5.1	5.2	5.1	5.4	5.2	5.6	5.2
Nickel (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.4
Nitrate	mg/L	ND	ND	0.33	0.43	0.39	0.26	ND	ND	ND	ND	ND	ND
Nitrite	mg/L	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/L	ND	ND	ND	ND	2.9	ND	ND	ND	ND		0.65	0.85
Potassium (Total)	mg/L	5.8	6	5.5	6.5	5.6	5.7	5.8	5.2	5.7	5.3	5.9	4.8
Radium 226/228	pCi/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium (Total)	mg/L	100	110	97	110	95	97	95	86	93	99	98	90

BRADY 2024 (CONTINUED)

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strontium (Total)	mg/L	1.2	1.2	1.1	1.3	1.1	1.1	1.1	0.97	1.1	1.1	1.1	1.1
Sulfate	mg/L	250	250	250	250	250	240	230	230	240	240	250	230
Thallium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Dissolved Solids	mg/L	700	700	700	650	640	670	630	600	610	640	640	660
Total Organic Carbon	mg/L	3	3	3	3.1	3.4	3.7	3.7	3.5	3.7	3.3	3.8	3.1
Total Phosphorus	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Turbidity	NTU	1.1	1.2	1.2	1	0.8	1.1	0.6	0.5	0.8	0.3	0.3	0.55
Uranium	ug/L	5.1	4.6	4.8	5.1	4.7	4.5	4.4	4.3	4.5	4.4	4.7	4.2
Vanadium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.7	3	3.2
Zinc (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	27

SAN XAVIER PUMPING PLANT 2024

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Field Measurements													
Dissolved Oxygen	mg/L	11.08	9.61	8.64	10.4	9.19	9	7.87	7.36	7.39	9.28	9.92	9.5
pH	Units	8.75	8.12	8.12	8.2	8.29	8.16	8.08	8.01	7.94	8.35	7.93	8.12
Conductivity	uS/cm	1098	1027	1051	1053	1044	1022	981	1005	996	976	973	959
Temperature	degF	48.3	56.8	62.4	73.2	73.8	79.7	83.5	84.4	77	67.9	56.6	54.5
Primary Analytes													
Alkalinity	mg/L	120	120	130	120	120	110	120	110	120	110	98	100
Aluminum (Dissolved)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum (Total)	ug/L	ND	27	54	30	39	24	52	57	100	37	21	39
Ammonia Nitrogen	mg/L	0.054	ND	ND	0.076	ND	ND	ND	ND	ND	0.052	ND	ND
Antimony (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic (Total)	ug/L	1.6	1.4	1.9	1.9	2.2	2.5	2.9	3.2	3.5	2.3	2.1	2.1
Barium (Total)	ug/L	130	140	140	140	150	140	120	120	130	130	140	130
Beryllium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Boron (Total)	mg/L	0.15	0.16	0.14	0.14	0.15	0.15	0.15	0.13	0.15	0.14	0.15	0.14
Bromide	ug/L	99	100	110	97	110	100	110	100	97	93	100	97
Cadmium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium (Total)	mg/L	70	76	73	74	77	69	65	57	69	66	63	65
Chloride	mg/L	120	110	110	120	110	110	100	100	100	110	110	110
Chromium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper (Dissolved)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoride	mg/L	0.41	0.37	0.38	0.37	0.37	0.34	0.4	0.37	0.36	0.35	0.36	0.36
Gross Alpha	pCi/L	4.73	3.98	4.2	6.22	5.86	4.86	4.65	5.11	4.63	4.21	ND	4.44
Gross Beta	pCi/L	ND	ND	4.97	5.94	4.11	4.36	ND	ND	4.28	4.58	5.2	4.55
Hexavalent Chromium	ug/L	ND	ND	0.021	0.023	0.023	0.033	0.023	ND	ND	ND	0.042	0.034
Iron (Dissolved)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese (Total)	ug/L	ND	2.6	3.6	2.9	3.7	3.1	9.5	7.1	7.4	6	4.7	3.2
Mercury	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Molybdenum (Total)	ug/L	5	5.2	5.2	5.3	5.3	5.1	5.1	5.1	5.4	5.4	6.3	5.6
Nickel (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate	mg/L	ND	0.16	0.29	0.36	0.3	0.14	ND	ND	ND	ND	ND	ND
Nitrite	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	0.55
Potassium (Total)	mg/L	5.9	6	5.5	5.9	5.9	5.7	5.9	5.3	6	5.5	5.8	6
Radium 226/228	pCi/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium (Total)	mg/L	110	110	98	100	100	99	97	85	98	100	100	100

SAN XAVIER 2024 (CONTINUED)

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strontium (Total)	mg/L	1.2	1.2	1.1	1.2	1.2	1.1	1.1	0.95	1.1	1.1	1.1	1
Sulfate	mg/L	250	250	250	250	250	240	230	230	230	250	260	250
Thallium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Dissolved Solids	mg/L	700	650	700	670	670	660	620	650	620	630	660	600
Total Organic Carbon	mg/L	3	2.9	3.1	3.2	3.4	3.7	3.7	4	3.6	3.5	3.7	3.3
Total Phosphorus	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Turbidity	NTU	0.65	0.7	1.9	1.3	1.7	1.3	1.2	1.9	3.3	1.1	1.5	0.7
Uranium	ug/L	4.7	4.7	4.8	5.1	4.8	4.6	4.3	4.4	4.4	4.5	5.6	5.1
Vanadium (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	3.1	ND	3.7	ND	ND
Zinc (Total)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

LAKE PLEASANT TOWERS 2024

Constituent	Units	May	Nov
Primary Analytes			
Alkalinity	mg/L	130	130
Aluminum (Dissolved)	mg/L	ND	ND
Aluminum (Total)	ug/L	ND	ND
Ammonia Nitrogen	mg/L	ND	ND
Antimony (Total)	ug/L	ND	ND
Arsenic (Total)	ug/L	4.1	3.4
Barium (Total)	ug/L	120	120
Beryllium (Total)	ug/L	ND	ND
Boron (Total)	mg/L	0.15	0.16
Bromide	ug/L	110	120
Cadmium (Total)	ug/L	ND	ND
Calcium (Total)	mg/L	68	70
Chloride	mg/L	100	110
Chromium (Total)	ug/L	ND	ND
Cobalt (Total)	ug/L	ND	ND
Copper (Dissolved)	ug/L	ND	ND
Fluoride	mg/L	0.42	0.42
Gross Alpha	pCi/L	3.83	6.11
Gross Beta	pCi/L	ND	6.44
Hexavalent Chromium	ug/L	0.022	0.059
Iron (Dissolved)	mg/L	ND	ND
Lead (Total)	ug/L	ND	ND

Constituent	Units	May	Nov
Primary Analytes (cont.)			
Manganese (Total)	ug/L	2.3	16
Mercury	ug/L	ND	ND
Molybdenum (Total)	ug/L	5.3	5.5
Nickel (Total)	ug/L	ND	ND
Nitrate	mg/L	0.1	ND
Nitrite	mg/L	ND	ND
Perchlorate	ug/L	ND	ND
Potassium (Total)	mg/L	5.8	6.3
Radium 226/228	pCi/L	ND	ND
Selenium (Total)	ug/L	ND	ND
Silver (Total)	ug/L	ND	ND
Sodium (Total)	mg/L	94	100
Strontium (Total)	mg/L	1.1	1.1
Sulfate	mg/L	230	250
Thallium (Total)	ug/L	ND	ND
Total Dissolved Solids	mg/L	660	650
Total Organic Carbon	mg/L	3.6	3.7
Total Phosphorus	mg/L	ND	ND
Turbidity	NTU	0.45	0.8
Uranium	ug/L	4.1	4.6
Vanadium (Total)	ug/L	ND	3
Zinc (Total)	ug/L	ND	ND

LAKE PLEASANT (TOWERS) NUTRIENTS 2024

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Epilimnion													
Alkalinity	mg/L					130	130	130	120	120	130		
Ammonia Nitrogen	mg/L					ND	ND	ND	ND	ND	ND		
Dissolved Organic Carbon	mg/L					3.7	4.1	4	3.7	3.8	3.8		
Kjeldahl Nitrogen	mg/L					0.17	0.22	0.27	0.22	0.25	ND		
Nitrate	mg/L					ND	ND	ND	ND	ND	ND		
Nitrite	mg/L					ND	ND	ND	ND	ND	ND		
Nitrate Nitrite as N	mg/L					ND	ND	ND	ND	ND	ND		
Orthophosphate as P	mg/L					ND	0.021	0.012	ND	ND	0.012		
Orthophosphate as PO4	mg/L					ND	0.066	0.038	ND	ND	0.036		
Secchi disk	ft	17.65	30.95	39.45	45.75	20.9	26.25	19.45	12.25	13.75	12.45	14.95	25.95
Total Dissolved Solids (TDS)	mg/L					640	640	660	640	660	650		
Total Organic Carbon	mg/L					3.7	4.1	3.9	4	3.7	3.8		
Total phosphorus as P	mg/L					ND	ND	ND	ND	ND	ND		
Total phosphorus as PO4	mg/L					ND	ND	ND	ND	ND	ND		
Total Suspended Solids (TSS)	mg/L					ND	ND	ND	ND	ND	ND		
Metalimnion													
Alkalinity	mg/L	130	130	130	110	130	130	130	120	130	130	130	140
Ammonia Nitrogen	mg/L	ND	0.037	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.041
Dissolved Organic Carbon	mg/L	3.6	3.5	3.5	3.4	3.5	3.7	3.7	3.7	3.4	3.9	3.5	3.1
Kjeldahl Nitrogen	mg/L	0.24	0.18	0.23	0.15	0.17	0.21	0.2	0.32	0.18	ND	0.24	0.18
Nitrate	mg/L	ND	ND	ND	0.12	0.1	0.17	ND	ND	ND	ND	ND	ND
Nitrite	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate Nitrite as N	mg/L	ND	ND	ND	0.12	0.1	0.17	ND	ND	ND	ND	ND	ND
Orthophosphate as P	mg/L	ND	ND	ND	ND	ND	ND	0.012	0.014	ND	ND	ND	0.019
Orthophosphate as PO4	mg/L	ND	ND	ND	ND	ND	ND	0.036	0.042	ND	ND	ND	0.058
Total Dissolved Solids (TDS)	mg/L	600	620	640	600	660	630	630	640	630	670	650	660
Total Organic Carbon	mg/L	3.5	3.5	3.4	3.4	3.6	3.6	3.6	3.9	3.4	3.9	3.7	3.6
Total phosphorus as P	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Phosphorus as PO4	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Suspended Solids (TSS)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hypolimnion													
Alkalinity	mg/L					130	130	130	130	130	130		
Ammonia Nitrogen	mg/L					ND	ND	ND	ND	ND	ND		
Dissolved Organic Carbon	mg/L					3.4	3.4	3.5	3.1	3.1	3.2		
Kjeldahl Nitrogen	mg/L					0.18	0.16	ND	0.21	0.15	ND		
Nitrate	mg/L					0.15	0.21	ND	0.22	ND	ND		
Nitrite	mg/L					ND	ND	ND	ND	ND	ND		
Nitrate Nitrite as N	mg/L					0.15	0.21	ND	0.22	ND	ND		
Orthophosphate as P	mg/L					ND	ND	ND	0.01	ND	0.015		
Orthophosphate as PO4						ND	ND	ND	0.032	ND	0.046		

LAKE PLEASANT (TOWERS) NUTRIENTS 2024

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total Dissolved Solids (TDS)						640	650	640	630	630	640		
Total Organic Carbon						3.4	3.5	3.4	3.3	3	3.1		
Total phosphorus as P						ND	ND	ND	ND	ND	ND		
Total Phosphorus as PO4						ND	ND	ND	ND	ND	ND		
Total Suspended Solids (TSS)						ND	ND	ND	ND	ND	ND		

LAKE PLEASANT (MIDDLE) NUTRIENTS 2024

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Epilimnion													
Alkalinity	mg/L					130	130	130	120	120	130		
Ammonia Nitrogen	mg/L					ND	ND	ND	ND	ND	ND		
Dissolved Organic Carbon	mg/L					3.8	4.1	3.9	3.7	3.8	3.8		
Kjeldahl Nitrogen	mg/L					0.18	0.25	0.3	0.22	0.2	ND		
Nitrate	mg/L					ND	ND	ND	ND	ND	ND		
Nitrite	mg/L					ND	ND	ND	ND	ND	ND		
Nitrate Nitrite as N	mg/L					ND	ND	ND	ND	ND	ND		
Orthophosphate as P	mg/L					0.041	ND	0.015	0.01	ND	0.015		
Orthophosphate as PO4	mg/L					0.12	ND	0.046	0.032	ND	0.046		
Secchi disk	ft	14.45	31.15	36.65	36.25	22.65	23.45	25.05	11.55	12.25	13.35	14.55	13.35
Total Dissolved Solids (TDS)	mg/L					640	630	650	650	640	680		
Total Organic Carbon	mg/L					3.7	4.1	3.9	4.1	3.7	3.8		
Total phosphorus as P	mg/L					ND	ND	ND	ND	ND	ND		
Total phosphorus as PO4	mg/L					ND	ND	ND	ND	ND	ND		
Total Suspended Solids (TSS)	mg/L					ND	ND	ND	ND	ND	ND		
Metalimnion													
Alkalinity	mg/L	130	130	130	130	130	130	130	130	130	130	130	130
Ammonia Nitrogen	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dissolved Organic Carbon	mg/L	3.6	3.5	3.6	3.4	3.7	3.7	3.7	3.6	3.3	3.9	3.5	3.3
Kjeldahl Nitrogen	mg/L	0.19	0.24	0.18	0.13	0.16	0.23	ND	0.23	0.17	ND	0.21	0.23
Nitrate	mg/L	ND	ND	ND	0.12	0.1	0.12	ND	ND	ND	ND	ND	ND
Nitrite	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate Nitrite as N	mg/L	ND	ND	ND	0.12	0.1	0.12	ND	ND	ND	ND	ND	ND
Orthophosphate as P	mg/L	ND	ND	ND	ND	ND	ND	0.012	0.011	ND	0.011	0.014	0.02
Orthophosphate as PO4	mg/L	ND	ND	ND	ND	ND	ND	0.036	0.034	ND	0.034	0.042	0.062
Total Dissolved Solids (TDS)	mg/L	610	620	640	630	650	630	640	630	630	670	690	670
Total Organic Carbon	mg/L	3.6	3.5	3.4	3.3	3.5	3.7	3.8	3.7	3.1	3.8	3.7	3.4
Total phosphorus as P	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Phosphorus as PO4	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Suspended Solids (TSS)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hypolimnion													
Alkalinity	mg/L					130	130	130	130	130	140		
Ammonia Nitrogen	mg/L					ND	ND	ND	ND	ND	ND		
Dissolved Organic Carbon	mg/L					3.4	3.5	3.3		3.1	3.1		
Kjeldahl Nitrogen	mg/L					0.13	0.21	0.23	0.28	0.15	ND		
Nitrate	mg/L					0.15	0.19	ND	0.2	ND	ND		
Nitrite	mg/L					ND	ND	ND	ND	ND	ND		
Nitrate Nitrite as N	mg/L					0.15	0.19	ND	0.2	ND	ND		

LAKE PLEASANT (MIDDLE) NUTRIENTS 2024

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Orthophosphate as P	mg/L					ND	ND	0.014	ND	ND	0.019		
Hypolimnion (cont)													
Orthophosphate as PO4	mg/L					ND	ND	0.042	ND	ND	0.058		
Total Dissolved Solids (TDS)	mg/L					630	630	640	620	640	630		
Total Organic Carbon	mg/L					3.4	3.3	3.2		3.1	3.1		
Total phosphorus as P	mg/L					ND	ND	ND	ND	ND	ND		
Total Phosphorus as PO4	mg/L					ND	ND	ND	ND	ND	ND		
Total Suspended Solids (TSS)	mg/L					ND	ND	ND	ND	ND	ND		

LAKE PLEASANT (UPPER) NUTRIENTS 2024

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Epilimnion													
Alkalinity	mg/L					130	130	130	120	120	130		
Ammonia Nitrogen	mg/L					ND	ND	ND	ND	ND	ND		
Dissolved Organic Carbon	mg/L					3.8	4.1	3.9	3.8	3.8	3.8		
Kjeldahl Nitrogen	mg/L					0.26	0.2	ND	0.26	0.21	ND		
Nitrate	mg/L					ND	ND	ND	ND	ND	ND		
Nitrite	mg/L					ND	ND	ND	ND	ND	ND		
Nitrate Nitrite as N	mg/L					ND	ND	ND	ND	ND	ND		
Orthophosphate as P	mg/L					ND	0.01	0.014	ND	ND	0.016		
Orthophosphate as PO4	mg/L					ND	0.032	0.042	ND	ND	0.05		
Secchi disk	ft	12.45	20.65	35.35	44.15	24.45	19.45	26.05	11.55	13.05	12.35		10.25
Total Dissolved Solids (TDS)	mg/L					650	640	650	670	640	660		
Total Organic Carbon	mg/L					3.7	4	3.9	4	3.7	3.8		
Total phosphorus as P	mg/L					ND	ND	ND	ND	ND	ND		
Total phosphorus as PO4	mg/L					ND	ND	ND	ND	ND	ND		
Total Suspended Solids (TSS)	mg/L					ND	ND	ND	ND	ND	ND		
Metalimnion													
Alkalinity	mg/L	130	130	130	130	130	130	130	130	130	130	130	130
Ammonia Nitrogen	mg/L	ND	ND	ND	ND	0.059	ND	ND	ND	ND	ND	ND	ND
Dissolved Organic Carbon	mg/L	3.6	3.5	3.5	3.4	3.5	3.6	3.6	3.6	3.3	3.7	3.5	3.3
Kjeldahl Nitrogen	mg/L	0.21	0.22	0.28	0.26	0.29	0.21	0.45	0.24	0.21	ND	0.22	0.25
Nitrate	mg/L	ND	ND	0.1	0.13	0.12	ND	ND	ND	ND	ND	ND	ND
Nitrite	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate Nitrite as N	mg/L	ND	ND	0.1	0.13	0.12	ND	ND	ND	ND	ND	ND	ND
Orthophosphate as P	mg/L	ND	ND	ND	ND	ND	ND	0.02	0.01	ND	ND	0.011	0.022
Orthophosphate as PO4	mg/L	ND	ND	ND	ND	ND	ND	0.062	0.032	ND	ND	0.034	0.068
Total Dissolved Solids (TDS)	mg/L	610	600	630	610	640	610	640	660	640	640	670	680
Total Organic Carbon	mg/L	3.6	3.5	3.4	3.4	3.4	3.8	3.5	3.7	3.3	3.8	4.1	3.4
Total phosphorus as P	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Phosphorus as PO4	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Suspended Solids (TSS)	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hypolimnion													
Alkalinity	mg/L					130	130	130	130	130	130		
Ammonia Nitrogen	mg/L					ND	ND	ND	ND	ND	ND		
Dissolved Organic Carbon	mg/L					3.4	3.6	3.3	3.3	3.2	3.2		
Kjeldahl Nitrogen	mg/L					ND	0.18	0.26	0.2	0.16	ND		
Nitrate	mg/L					0.19	0.19	0.24	0.21	ND	ND		

LAKE PLEASANT (UPPER) NUTRIENTS 2024

Constituent	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Nitrite	mg/L					ND	ND	ND	ND	ND	ND		
Hypolimnion (cont)													
Nitrate Nitrite as N	mg/L					0.19	0.19	0.24	0.21	ND	ND		
Orthophosphate as P	mg/L					ND	ND	0.01	ND	ND	0.026		
Orthophosphate as PO4	mg/L					ND	ND	0.032	ND	ND	0.08		
Total Dissolved Solids (TDS)	mg/L					650	630	630	630	630	660		
Total Organic Carbon	mg/L					3.3	3.5	3.2	3.3	3	3.1		
Total phosphorus as P	mg/L					ND	ND	ND	ND	ND	ND		
Total Phosphorus as PO4	mg/L					ND	ND	ND	ND	ND	ND		
Total Suspended Solids (TSS)	mg/L					ND	ND	ND	ND	ND	ND		