

CENTRAL ARIZONA PROJECT

2022 | 2023
BIENNIAL

Budget

EXECUTIVE SUMMARY
& OVERVIEW

YOUR WATER • YOUR FUTURE

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The 2022 / 2023 budget document includes additional sections and can be found in it’s entirety on the CAP website :

<https://www.cap-az.com/departments/finance/biennial-budgets/2022-23-budget>

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How to Use the Biennial Budget



The Central Arizona Water Conservation District (CAWCD or District), also known as the Central Arizona Project (CAP), presents the 2022 / 2023 Biennial Budget in one cohesive document. The budget document includes the following sections:

Executive Summary provides a high-level overview of the District to better understand the business and key issues. The section includes the General Manager’s Letter, the CAWCD Board of Directors and the CAP Profile.

Biennial Budget Overview provides an overall summary of the District’s revenues, expenses and capital expenditures. Selected financial data is provided as well.

Planning & Authorities reviews the District’s planning and control processes, including strategic planning, financial planning and capital planning. The section identifies the District’s strategic framework, plan, and performance measures, as well as providing the District’s debt authorities, obligations and fund reserves.

Operating Budget provides the budget information for the day-to-day operations of the District for the General Fund, CAGR Account, Supplemental Water Account and Captive Insurance Fund.

Capital Budget provides an overview of the capital budget as well as Capital Improvement Program profiles.

Organizational Summaries provides departmental budgets and their business goals and accomplishments.

Appendix provides supplemental information such as water deliveries, rate schedule, pumping power costs, debt schedules, reconciliation of operations, maintenance & replacement (OM&R) costs, district policies, county profiles and helpful glossary.

FINANCIAL PLANNING & CONTROLS

The budget is a comprehensive plan of action for the District. It is a key tool for financial planning and control. The budget is a key tool for financial planning and control. The budget is a key tool for financial planning and control.



CAPITAL PLANNING

Capital planning is a key component of the District's financial planning. It involves identifying and prioritizing capital projects and investments. Capital planning is a key component of the District's financial planning.



CAP - Table of Organization





TO OUR BOARD, CUSTOMERS AND CONSTITUENTS



The 2022/2023 Biennial Budget is the ninth budget we have prepared since the Central Arizona Water Conservation District (CAWCD or District) Board of Directors adopted a two-year financial planning cycle. The two-year process allows the Board and staff to concentrate primarily on the budget during the odd years; and address strategic planning, water rates, reserves, and financing strategies in the even years. Each part of the cycle complements the work done in the other year. Our biennial budgets identify our goals and objectives, key issues and challenges, opportunities to explore and the direction of future initiatives. Under the policy guidance of the CAWCD Board and with the collaboration of Central Arizona Project (CAP) water users and stakeholders, we are confident that our management and delivery of the portion of Arizona's Colorado River water entrusted to us will be successfully achieved.

2020 and 2021 were unusual years for CAP, and the world, to say the least. For 15 months, our administrative staff worked remotely during the COVID-19 pandemic, while our field crews worked modified shifts to allow for social distancing. Our mantra during this time was to "keep the water flowing and keep our employees safe." Well, we did just that. The pandemic challenged our staff in ways we could not have imagined, but from the outside, you'd never know it. Their dedication and professionalism under incredible stress was inspiring and CAP was able to not only execute its mission during the pandemic, but to adapt and innovate as well.

One such innovation was the creation of our new Strategic Plan, a process that began before the pandemic but continued remotely until our Board finalized the newest version. The new 2022 Strategic Plan is the basis for the 2022/2023 Biennial Budget. It identifies the strategic issues, objectives, and associated action plans that are critical to carrying out our mission. These action plans are organized under eight Key Result Areas (KRAs):

- Water Supply
- Power
- Project Reliability
- Finance
- Public Trust, Partnerships, and Leadership
- Stewardship and Sustainability
- Groundwater Replenishment
- Workforce

Finalized in 2019, the Drought Contingency Plan (DCP) was designed to create voluntary reductions in Colorado River diversions in response to the ongoing drought in the western United States. Under DCP, 2022 will be the first year that the Colorado River Basin States face a Tier 1 shortage. Given Arizona's junior status on the river, much of the ensuing reduction will fall on CAP. As a result, the Water Supply KRA will receive more outside attention than ever before.

In 2022, Arizona will face a reduction of 512,000 acre-feet. This amount represents just under 1/3 of what has been available to CAP historically and will fall largely on agricultural customers in central and southern Arizona. The bad news is that the region remains in the midst of a two-decade drought. Fortunately, the 2019 Drought Contingency Plan requires additional consultation and coordination as the drought intensifies.



The Water Supply KRA is focused on protecting CAP water supplies. Addressing volatility of energy market is the focus of the Power KRA. CAP has successfully emerged from the decommissioning of its primary source of energy, Navajo Generating Station, by participating in the energy markets. Recent power system events have caused higher prices and volatility in the energy markets.



For the more static base load portion of CAP's energy needs, CAP has entered into several contracts of varying lengths to lock in availability and rates. These contracts include a 5-year Power Purchase Agreement (PPA) that ends in 2024 for the purchase of up to 35 megawatts (MW) from the fleet of generation resources within SRP and at rates that are tied to the natural gas index, a PPA for the energy generated from the AZ Solar 1 site at a flat rate for 20-years (ending in 2040), and a PPA for the expansion of the AZ Solar 1 site with 20 MW of capacity, with 60 megawatt hours (MWh) of battery storage, that will come online in 2023 and provide energy at a set rate for the 20-year term. We also have an existing 50-year contract for up to 162 MW of capacity and associated energy from Hoover Dam that does not expire until 2067.



For the more flexible variable load portion, our staff continually monitors the energy market for favorable forward purchases, up to three years in advance, locking in price certainty for our customers. Another tool we have is to schedule our pumping to off-peak hours whenever possible, to avoid the peak and super-peak pricing. Because we have flexibility on when to pump water, CAP has the ability to manage energy costs. That being said, the energy market is hardening after separate severe power system events in California and Texas over the last year. These events brought uncertainty to the market, which must now be priced in to forward-purchase products. As a result, much of CAP's energy has already been locked-in for 2022, but starting in 2023, there may be a considerable spike in the energy rate if the current pricing structure persists.



The Project Reliability KRA seeks to provide reliable and cost-effective operations, maintenance, and replacement of CAP infrastructure, including its technology assets. As our infrastructure ages, our staff continue to evaluate end-of-life options, including replacement-in-kind, upgrades, and new alternatives. CAP has also elevated its focus on Information Security, given the large number of high-profile cyber attacks that have occurred recently. Because CAP is considered critical infrastructure, our physical and information assets must be protected with every tool we can muster.

The Finance KRA continues to be a driver in many of our decisions. When evaluating alternatives for

operating the CAP, staff must always consider the financial implications, not just for our customers, but for our taxpayers as well. In the past two years, we have tried to make the rate-setting process as transparent as possible by soliciting customer feedback at roundtable discussions and then incorporating their feedback into staff recommendations. One major outcome of these conversations was to start applying current-year tax revenues (as determined by the Board) toward Federal Repayment two years in advance. Our Municipal and Industrial (M&I) customers are then able to know their Capital Charge obligations ahead of their own rate-setting and tax cycles.



The Public Trust, Partnerships, and Leadership KRA is all about engaging the public and trying to balance the competing needs among customers, taxpayers, and stakeholders. Over the past two years, CAP staff members have been working to establish a series of Joint Coordination Meetings with our municipal partners to gain a mutual understanding of underlying priorities. We have pioneered new ways of soliciting the public's feedback, including electronic blue cards (comment cards) at our public meetings. We continued to evaluate

other potential outreach options, including exploring how a visitor center may help our constituents understand the influence CAP has on their daily lives.

Given the challenges outlined above, it would be easy for CAP staff to focus solely on ways to conserve what we have, but that would do a disservice to our customers. We strive to do more with less. The Stewardship and Sustainability KRA not only focuses on supporting programs like the Multi-Species Conservation Program and reducing CAP's carbon footprint, but it also allows us to look for strategic partnerships that support sound water management, including wheeling of non-project water through the CAP system. Once all the environmental impacts have been assessed, CAP expects to be able to deliver alternative sources of water throughout its system.

The Central Arizona Groundwater Replenishment District (CAGR) resides within CAP and as a result, the Board felt it needed its own KRA: Groundwater Replenishment. The CAGR engages the public to educate



them regarding the impacts of groundwater pumping and the need for replenishment. It also has a statutory obligation to provide replenishment options for its member areas. As a result of the diligent work of water acquisition staff, including completion of a historic transaction with the Gila River Indian

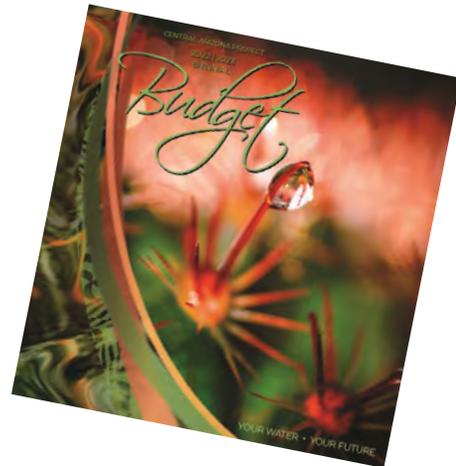


LOWER COLORADO RIVER MULTI-SPECIES CONSERVATION PROGRAM (MSCP)



Community in 2019, the CAGR is strongly positioned to meet its obligations into the future.

Finally, the Workforce KRA focuses on recruiting, retaining, training, and equipping our staff to ensure that CAP is a premier employer. Emerging from the COVID-19 pandemic, we learned that our staff really are dedicated to keeping the water flowing and keeping their fellow employees safe. The demands placed on them were tremendous, but at every turn, CAP's incredible staff answered the call. We must continue to evaluate the market to ensure that our salaries, benefits, training programs, and culture attract a skilled and diverse workforce.

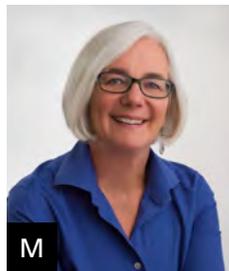
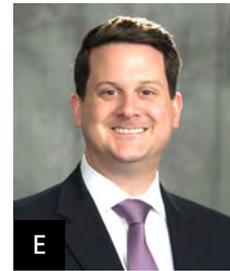
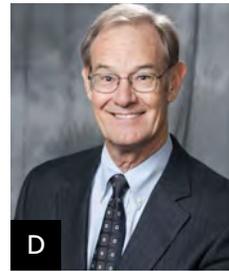
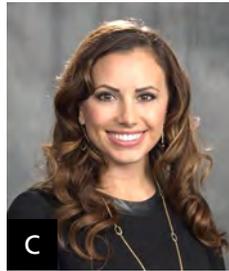


We take pride in this publication and are pleased to share this latest edition with all of you. I'd like to extend a special thanks to our finance and accounting staff, who assembled much of this document remotely, while CAP was still under COVID-19 protocols. Their professionalism and dedication during this process is just one example of how CAP rallied to keep each other safe while keeping the water flowing. As we emerge from this unprecedented challenge, we are faced with a familiar one: drought. I am confident this budget will give us the resources we need to meet this moment.

Theodore C. Cooke

General Manager

THE CAWCD BOARD OF DIRECTORS



Terry Goddard
President



Mark Taylor
Vice President



Alexandra Arboleda
Secretary

Maricopa County

A. Alexandra Arboleda	Term Ending 2022
B. Lisa A. Atkins	Term ending 2024
C. Jennifer Brown	Term ending 2022
D. Terry Goddard	Term ending 2024
E. Benjamin W. Graff	Term ending 2022
F. Jim Holway	Term ending 2022
G. Mark Lewis	Term ending 2022
H. Heather Macre	Term ending 2024
I. Jennifer Martin	Term ending 2024
J. April Pinger-Tornquist	Term ending 2024

Pima County

K. Karen Cesare	Term ending 2026
L. L.M. "Pat" Jacobs IV	Term ending 2026
M. Marie Pearthree	Term ending 2026
N. Mark Taylor	Term ending 2026

Pinal County

O. Stephen Miller	Term ending 2026
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CAWCD GOVERNANCE

CAWCD is a special district which has the same authority as a municipal corporation and is governed by a 15-member popularly-elected Board. Board members are elected from Maricopa (10), Pima (4) and Pinal (1) counties. Members serve staggered six-year terms and are not compensated for their time. Subsequent to each election (five members are elected every 2 years), the Board elects the President, Vice President and Secretary of the Board as well as the remaining members on the Executive Committee. The Board meets monthly and has 5 established committees.

EXECUTIVE COMMITTEE

The Executive Committee is comprised of the President, Vice President, Secretary, Immediate Past President and two Board Members elected by the Board with all three counties represented among the membership. The Committee does not meet regularly, but may be called to handle emergencies between Board meetings and to make recommendations to the Board. All actions of the Executive Committee are subject to ratification by the Board.

FINANCE, AUDIT & POWER COMMITTEE

The Finance, Audit & Power Committee (FAP) is chaired by the Board Vice President and provides assistance to the Board in fulfilling its responsibilities to the electorate relating to accounting and reporting, the quality and integrity of the District's financial reports, and the budgetary and fiscal practices of the district, operational security, energy risk management and other power and transmission matters. The Committee also oversees the Internal and Independent Auditors for the District.

CAGR D & UNDERGROUND STORAGE COMMITTEE

The Central Arizona Groundwater Replenishment District (CAGR D) & Underground Storage Committee is chaired by the Board Secretary and provides assistance to the Board by addressing issues, policies and proposed legislative amendments relating to the CAGR D's responsibilities and authorities and CAWCD's underground storage and recovery activities.

PUBLIC POLICY COMMITTEE

The Public Policy Committee is chaired by a Board member appointed by the Board President and provides recommendations to the Board for positions on state legislative issues, federal legislative issues and other public policy issues.

NOMINATING COMMITTEE

The Nominating Committee meets in January of odd years to provide recommendations to the Board for the election of officers and Executive Committee Members. The Committee is comprised of three Board Members appointed by the Board President.

SPECIAL COMMITTEES

In addition to the established committees, the Board President may appoint Special Committees to make recommendations to the Board on issues of significance or to carry out directives of the Board.

In recent years, these special committees have been referred to as Task Forces, and have been created with a specific scope to address a pertinent policy topic and make recommendations to the Board.





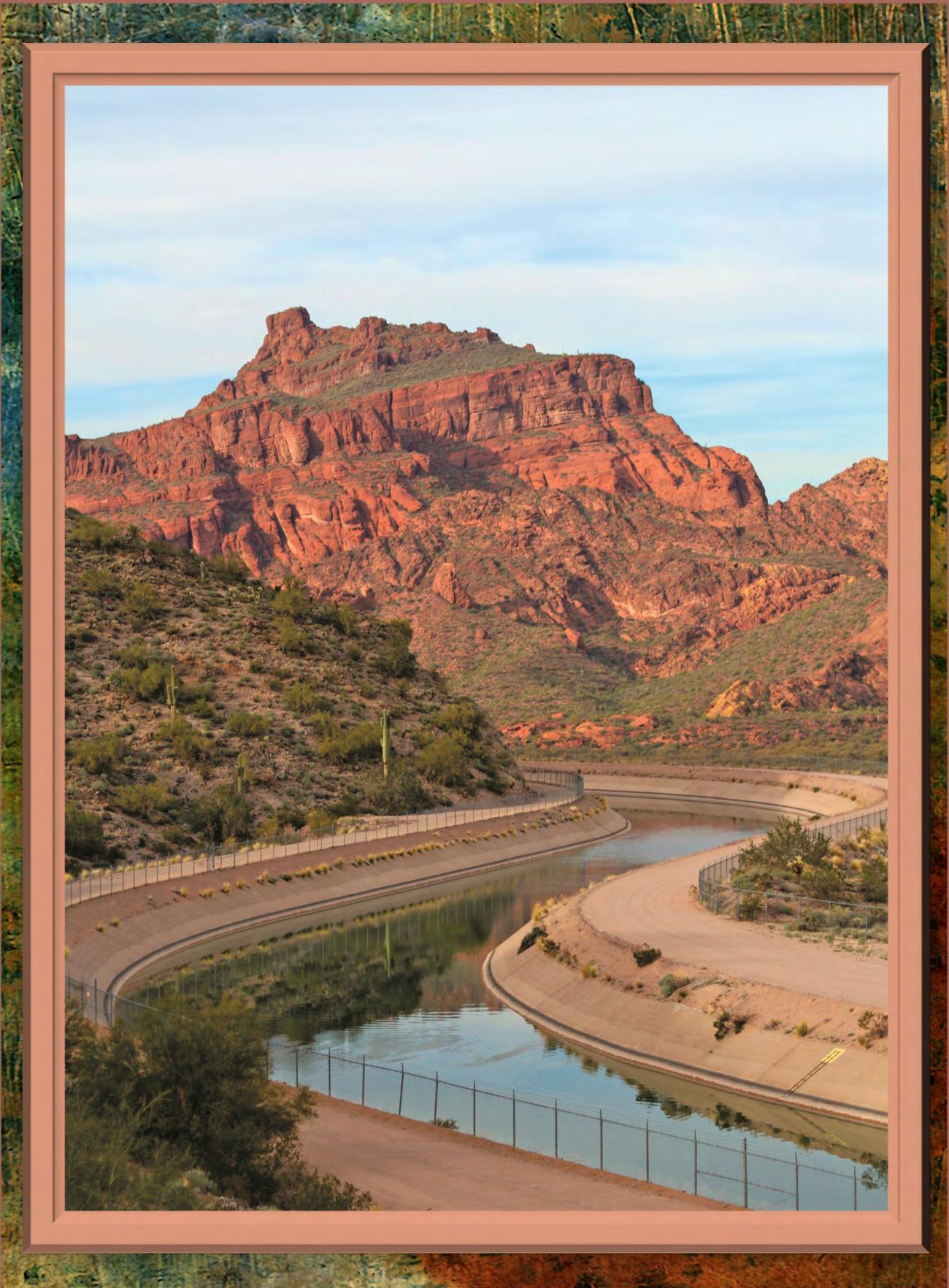
CAP Logo from Headquarters' Board Room

GFOA AWARD



The Government Finance Officers Association (GFOA) of the United States and Canada presented a Distinguished Budget Presentation Award to the Central Arizona Water Conservation District for its Biennial Budget for the Biennium beginning January 1, 2020. In order to receive this award, a government unit must publish a budget document that meets program criteria as a policy document, as an operational guide, as a financial plan and as a communication device.

This award is valid for a period of two years. Central Arizona Project believes the current budget continues to conform to program requirements and will be submitting it to the GFOA to determine its eligibility for another award.



SRP Turnout near Salt Gila Pumping Plant

WHO WE ARE



Our Mission

Central Arizona Project's dedicated team reliably manages and delivers Colorado River water to Maricopa, Pinal, and Pima Counties

Our Vision

Central Arizona Project serves as a collaborative partner and innovative leader in sustainable management and reliable delivery of water for Central Arizona

Our Values

Teamwork: Working together to reach consensus and achieve common goals

Safety: Keeping coworkers and the workplace safe

Integrity: Doing the right thing with consistency and dedication

Service: Caring for the needs of stakeholders, coworkers, and our community

Professionalism: Delivering superior results

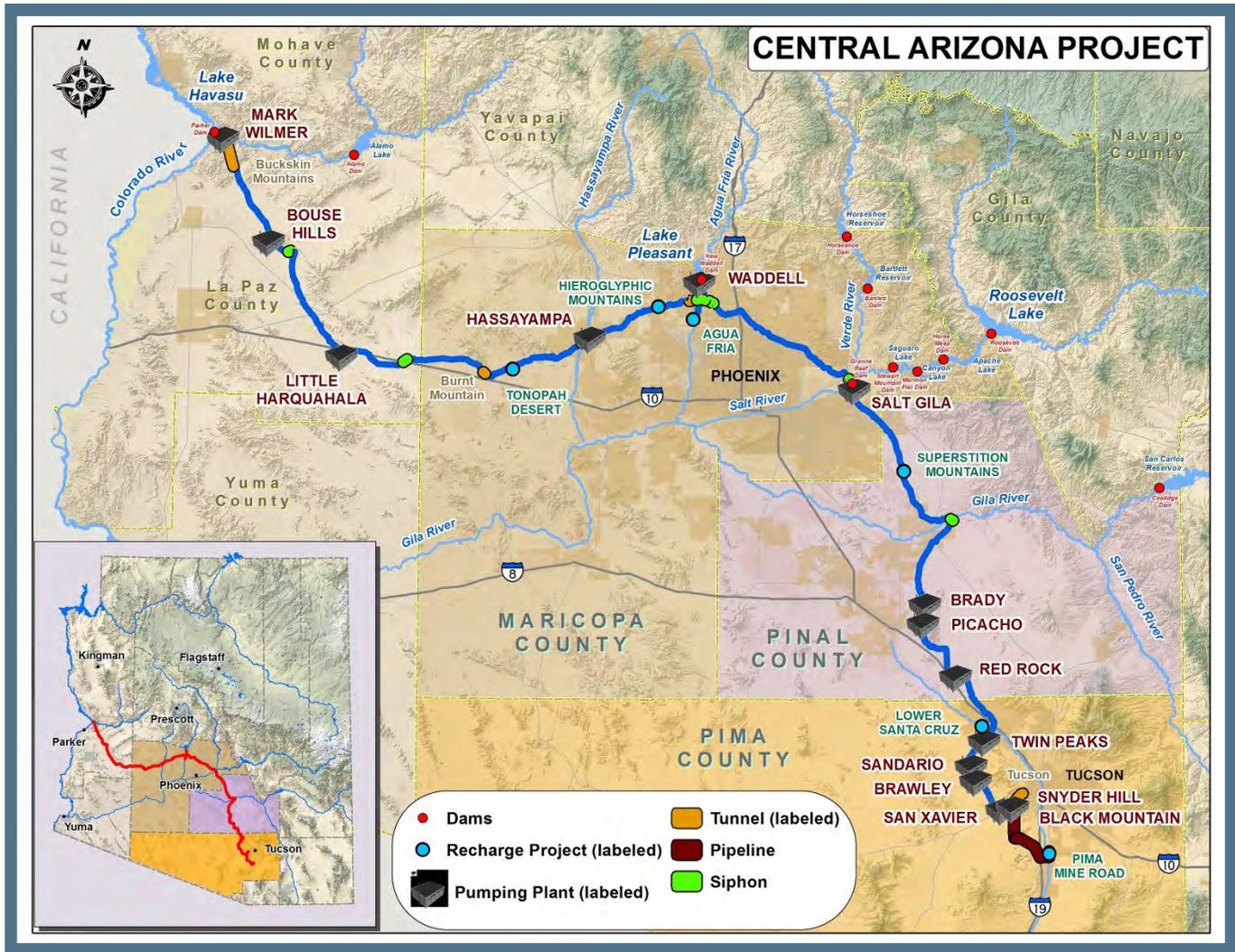
Our Beliefs

Central Arizona Project employees work with pride to create a safe, supportive and friendly workplace. We believe in:

- Employees who are reliable and principled
- Service that is topnotch for our internal and external customers
- Work done professionally and responsively
- Relationships among employees and customers that are collaborative and innovative
- Community connection through volunteerism, charitable contributions and public education



THE CAP SYSTEM



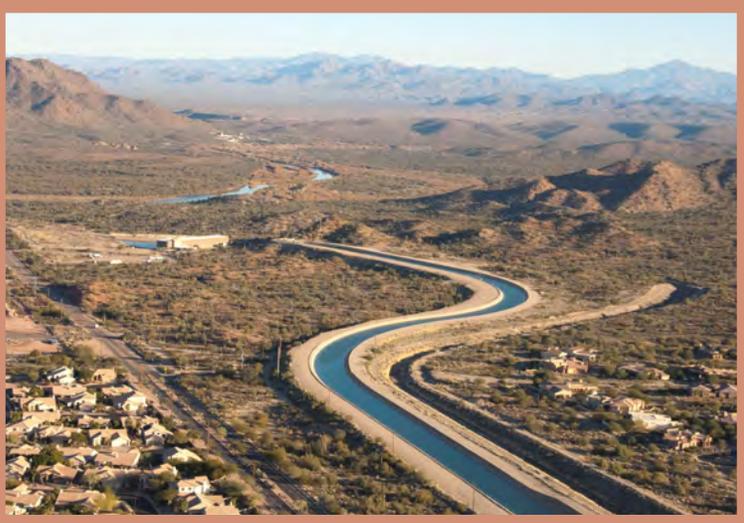
Aqueduct	Length (Miles)	Pumping Plants	Lift (Feet)	Tunnels & Siphons	Turnouts
Hayden-Rhodes	190	5	1,251	10	17
Fannin-McFarland	63	1	86	1	20
Tucson	83	9	1,569	1	17
Totals	336	15	2,906	12	54

CAP PROFILE

Central Arizona Project (CAP) was created in 1971 as the Central Arizona Water Conservation District (CAWCD), pursuant to state law. CAWCD is a three-county water conservation district. While generally having the same authority as a municipal corporation, CAWCD is a special district with duties focused on managing and providing water to a large region. CAWCD is the largest supplier of renewable water supplies in the state of Arizona. It is the state's largest contractor of Colorado River water with an entitlement of nearly 1.5 million acre-feet during normal supply conditions. An acre-foot of water is equal to approximately 326,000 gallons, enough water to serve about three average homes for a year in the CAP service area.

PURPOSES OF CAWCD

CAWCD has three primary purposes. First, it is the steward of central Arizona's Colorado River water entitlement and a leader in Arizona's water community. The District works with the Arizona Department of Water Resources to meet the current and future water needs for CAWCD customers by: (a) focusing on understanding the current and future reliability of Colorado River supplies; (b) assessing current and future water needs in the CAWCD service area; (c) identifying the mechanics of storing water underground and recovering it for future use, and; (d) identifying additional renewable water supplies that could be brought into the CAWCD service area.

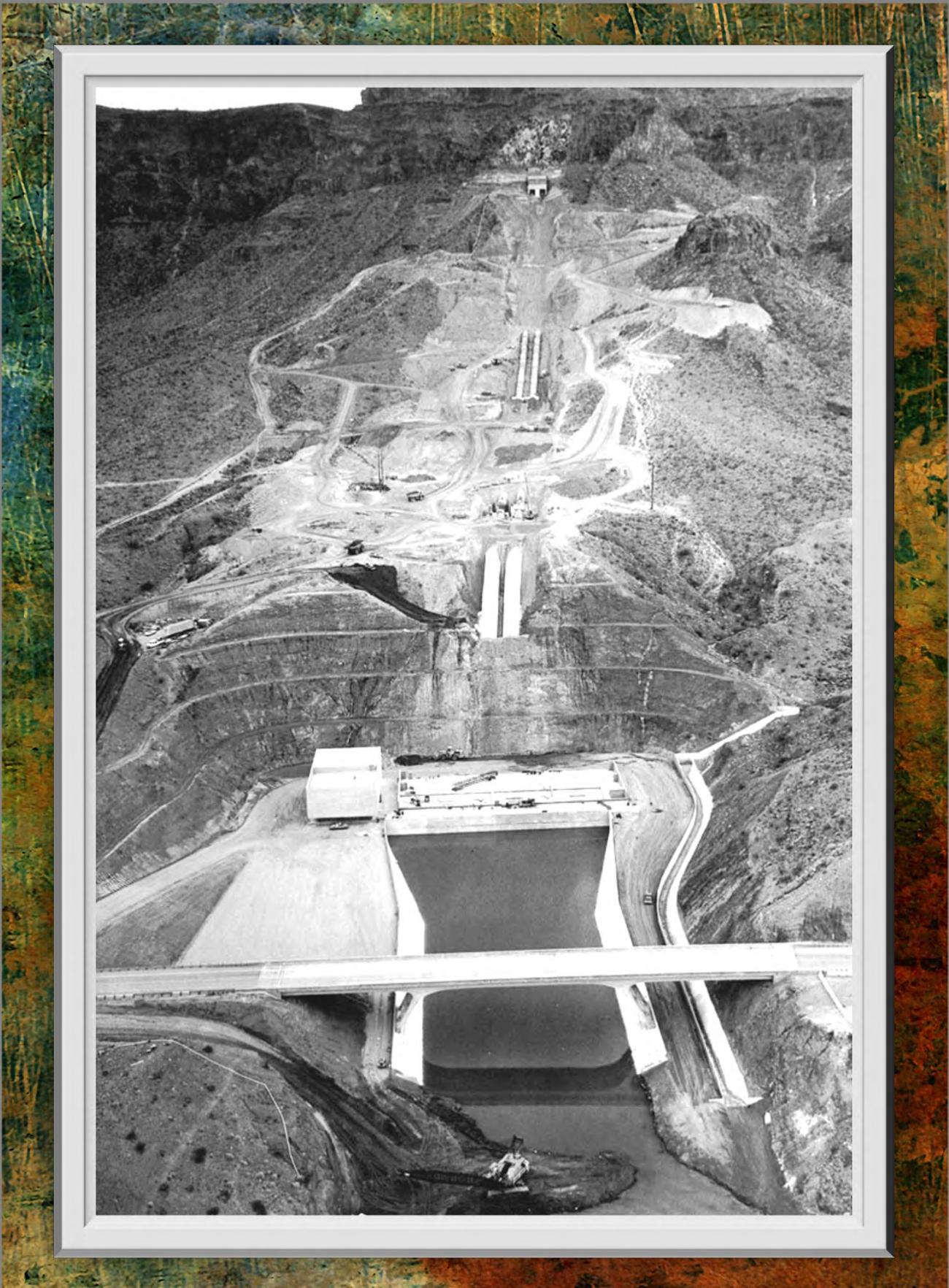


Salt Gila Pumping Plant—Looking north along Power Road

Second, CAWCD delivers Arizona's share of Colorado River water through a conveyance system that it also operates and maintains. The CAP aqueduct begins at the Arizona-California border near the confluence of the Bill Williams and Colorado Rivers at Lake Havasu and extends east and then south past Tucson to the Tohono O'odham Nation. The CAP system includes approximately 336 miles of aqueduct, 15 pumping plants, 12 tunnels and siphons and 54 turnouts. Using its pumps, CAP lifts water nearly 3,000 feet from the Colorado River to the CAP terminus just south of Tucson.

Finally, CAWCD is responsible for repaying the federal government those reimbursable costs associated with the construction of CAP.

Over time, CAWCD's statutory responsibilities have expanded to include authorization to provide groundwater replenishment services through the CAGR, and to build, operate and maintain underground storage projects as well as being a recovery agent of stored water.



Mark Wilmer Pumping Plant

CAP HISTORY

During the early 1900's, the seven states of the Colorado River Basin - Arizona, California, Nevada, New Mexico, Wyoming, Colorado and Utah - negotiated for shares of Colorado River water. In 1922, representatives from the seven states and the United States government created the Colorado River Compact, which divided the states into lower and upper basins and gave each basin 7.5 million acre-feet of water to annually apportion. Arizona, California and



Lyndon B. Johnson signing CAP Construction bill

Nevada were sectioned into the Lower Basin and were instructed to divide the 7.5 million acre-foot allotment among themselves.

Arizona was in dispute over its share of the Colorado River, however, and was the last state to approve the Compact in 1944. Today in the Lower Basin, Arizona has rights to 2.8 million acre-feet of Colorado River water per year, California is entitled to 4.4 million acre-feet per year and Nevada has an annual allocation of 300,000 acre-feet.

In 1946, the Central Arizona Project Association was formed to educate Arizonans about the need for CAP and to lobby Congress to authorize its construction. It took the next 22 years to do so and in 1968, President Lyndon B. Johnson signed a bill approving construction of the CAP. The bill provided for the U.S. Bureau of Reclamation (Bureau) of the Department of the Interior to fund and construct CAP and for another entity to repay the federal government for certain costs of construction when the system was complete.

In 1971, CAWCD was created to provide a means for Arizona to repay the federal government for the reimbursable costs of construction

and to manage and operate CAP. Construction began at Lake Havasu in 1973 and was completed 20 years later south of Tucson. The entire project cost approximately \$4 billion to construct.



Early Construction at Mark Wilmer Pumping Plant in Havasu



Early Construction at Mark Wilmer Pumping Plant in Havasu



Tucson Groundbreaking Celebration

CAWCD WATER USERS

Through the CAP system, CAWCD delivers Colorado River water to many different types of customers throughout its three-county service area, encompassing Maricopa, Pima and Pinal counties. CAWCD’s expansive service area includes approximately 6.0 million people, roughly 80% of the state’s population, and spans 24,000 square miles of land, which is 20% of the state’s area.

CAP’s Headquarters is located along their aqueduct in north-central Phoenix, the capital of Arizona.



CAP delivers water pursuant to delivery agreements between the federal government, Municipal and Industrial (M&I) and Tribal stakeholders. Long-term contracts total 1.415 million acre-feet of water, and in addition, excess water is made available for specific agricultural customers. Historically, the combined deliveries totaled about 1.5 million acre-feet of water annually though this amount is projected to be significantly less in the upcoming years, due to shortage.



AGRICULTURAL (AG) CUSTOMERS

Representing three of Arizona's five "Cs" — Cattle, Citrus and Cotton — agriculture in Arizona is a multi-billion dollar industry. According to a 2014 study by the University of Arizona's College of Agriculture & Life Sciences, agriculture contributes more than \$17 billion to state output. CAP's agricultural customers are primarily large irrigation districts that deliver water to farmers.

	Maricopa	Pima	Pinal	Arizona
2000 Population	3,092,927	848,375	182,435	5,175,581
2010 Population	3,824,058	981,168	376,369	6,401,568
2020 Population	4,439,220	1,052,375	467,932	7,294,587
2055 Projected Population	6,414,083	1,277,075	1,181,033	10,504,530
Percent change projected between 2020 and 2055	44.49%	21.35%	152.39%	50.8%
2020 Labor Force (<i>non-farm</i>)	2,336,776	493,760	192,731	3,566,534
2020 Land Area (<i>square miles</i>)	9,222	9,184	5,374	113,635
2020 Unemployment Rate	6.4%	6.9%	6.5%	6.7%

Based on July 1, 2020 estimates available from the Arizona Commerce Authority (<https://www.azcommerce.com>)

As part of the Arizona Water Settlements Act (AWSA), agricultural users of CAP water relinquished their long-term non-Indian Agriculture allocations in exchange for a limited volume of water reserved for their exclusive use. Commonly referred to as the Ag Settlement Pool, this volume of excess water declines over time, and is the first priority of excess water made available by the CAWCD Board to CAP's agricultural customers through 2030. When available, CAP reserves and makes available a volume of excess water (currently up to 300,000 acre-feet) for specific agricultural customers. The Ag Settlement Pool has historically represented about 20% of CAP deliveries though, due to shortage, reduced amounts are available in 2022 and eliminated in 2023.

As with other stakeholders, CAP reaches out regularly to the agricultural community through informational meetings, tours and other briefings. This communication ensures that CAP learns of issues that are important to Arizona agriculture and likewise informs agricultural customers of issues confronting CAP.

More information visit: [CAP-AZ.com](https://www.cap-az.com) > [Water](#) > [Contracts and Documents](#) > [Allocations](#)

MUNICIPAL & INDUSTRIAL SUBCONTRACTORS

CAP does not treat water for drinking, but rather is the wholesaler that provides water to cities, water utilities and other entities. After treating the water, cities deliver it to residents. More than 50 cities and private water companies utilize CAP supplies to augment their water supplies, including Arizona's largest cities: Phoenix, Tucson, Mesa, Chandler, Glendale and Scottsdale. CAP M&I subcontract allocations total more than 620,000 acre-feet. Most M&I customers take delivery of their full CAP allocation each year, either directly or through underground storage agreements. As cities build treatment plants and water delivery infrastructure, they are able to use more of their allocated subcontract water.



Old Town Downtown Scottsdale

CAP conducts regular tours and informational meetings to reach out to its M&I water users, and CAP staff members periodically tour city facilities to learn more about their operations and water management.

More information visit: [CAP-AZ.com](https://www.cap-az.com) > [Water](#) > [Contracts and Documents](#) > [Allocations](#)





TRIBAL STAKEHOLDERS

CAP is the largest single provider of Colorado River water to Tribal water users in the river system, delivering water to Indian communities in central and southern Arizona. Almost half (46%) of CAP's water allocations are designated for Indian Tribes. This water is used for a variety of purposes, including municipal (i.e., residential), farming, leases to cities and underground storage.

Although there are 22 Tribes in Arizona, only thirteen currently have partially or fully resolved water right claims. CAP, along with other stakeholders, continues to engage in settlement discussions with the Tribes, nine of which still have unresolved claims. Four other Tribes hold senior Colorado River rights adjudicated in *Arizona v. California*.

CAP is working to develop long-term relationships with Tribal communities through outreach efforts that include invitations to tours, informational meetings and other public events. As relationships with the Tribes have grown and continue to develop, CAP has organized and participated with several organizations in events with a Tribal emphasis.

More information visit: CAP-AZ.com > [About](#) > [Tribal Water Rights](#)

CENTRAL ARIZONA GROUNDWATER REPLENISHMENT DISTRICT

CAGRDR has a statutory obligation to replenish groundwater used by members in CAP's three-county service area. Created in 1993, CAGRDR must replenish groundwater withdrawals made by new developments enrolled in the CAGRDR, and water providers and homeowners agree to pay the cost to replenish any amount of groundwater pumped beyond limitations set by the state. CAGRDR currently replenishes groundwater on behalf of 23 member service areas (MSA) and 1,218 member land (ML) subdivisions representing approximately 297,611 homes.



Pima Mine Road Recharge Site

More information visit: CAGRDR.com



Arizona Housing Developments

WATER PRIORITIES



HOW DOES THE SYSTEM WORK?

As with virtually everything related to the Colorado River – access depends on priorities. The Central Arizona Project’s right to water on the Colorado River is “junior” to California water users. Under the 2007 Interim Guidelines and the 2019 Drought Contingency Plan, CAP suffers the largest reductions in use. However, within Arizona, CAP has a right to divert water that equal and higher priority users in the state are not using. These concepts are important in order to understand the set of priorities within the CAP priority system.

HOW DID THE PRIORITIES EVOLVE?

To fully understand the CAP priorities system, a brief history review is in order.

After authorization in 1968, CAP construction began in 1973. By the early 1980s, as the first part of construction was nearing completion, decisions were made regarding who would have long-term contract entitlements to CAP water. At that time, long-term contracts were split into three types – municipal and industrial (M&I), Tribal and agricultural.



CAP Canal along Frank Lloyd Wright Blvd - Scottsdale Turnouts and the Loop 101

- M&I subcontracts were issued primarily on the basis of projected future growth and consideration of existing supplies including other water supplies.
- Tribal contracts were the result of a number of federal decisions including Congressionally authorized water settlements.
- Irrigation districts were issued subcontracts for a percentage of the remaining available supply.

In the early years, it was assumed that agriculture would take the largest portion of the available CAP supply as the other users grew into their entitlements. But once the water started flowing in 1985, reality set in and for many irrigation districts, CAP water was too expensive compared to pumping groundwater. The cost issues came to a head in the early 1990s, which led to a decade of litigation and negotiations, culminating in the 2004 Arizona Water Settlements Act and a reconfiguration of the CAP priority system.



For many irrigation districts, CAP water was too expensive compared to pumping groundwater. The cost issues came to a head in the early 1990s, which led to a decade of litigation and negotiations, culminating in the 2004 Arizona Water Settlements Act and a reconfiguration of the CAP priority system.

The agricultural entitlements were relinquished by the irrigation districts and converted from percentage of supply to fixed volumes. In exchange for giving up their long-term rights, the irrigation districts were given access to a

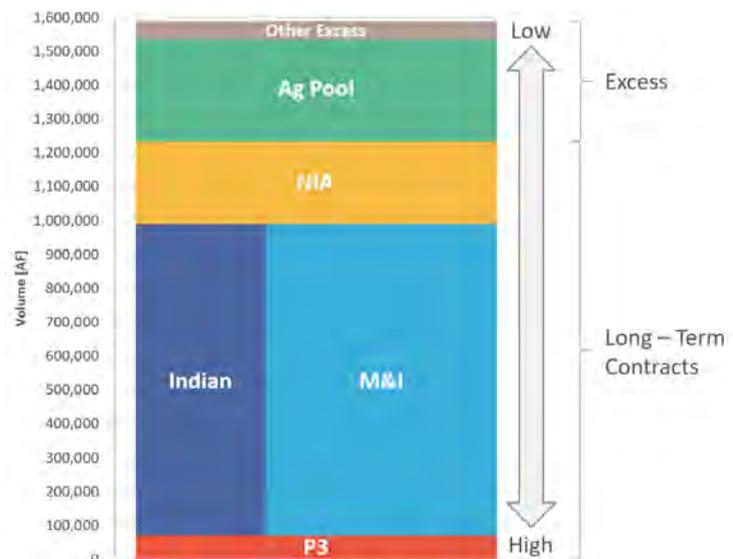
lower-cost fixed volume of even lower priority water. Access to this Agricultural Settlement Pool (Ag Pool) water expires in 2030.

The “Non-Indian Agricultural” (NIA) priority water was then allocated to tribes, cities and towns, and some was held back for future allocation. This term is a head-scratcher for many. But that’s because it relates to the lineage of the term – not to the way it’s used today. NIA refers to water that was originally designated for agriculture use, excluding tribes.

CAP PRIORITY SYSTEM - A REVIEW

The block chart provided on the right is a pictorial representation on how the priority system works. Here’s a quick tutorial on the information being displayed, representing CAP’s internal priority system.

The first thing to note is the “up/down” arrow on the right-hand side with “low” on the top and “high” on the bottom. That means that in this chart, it is better to be closer to the bottom, rather than to the top!



*Based on estimated 2022 orders prior to DCP contributions, system consumption and IFC reaction. Includes NIA reallocation water.

So, going over the chart from the bottom-up:

LONG-TERM CONTRACTS

P3– This is a small portion of the highest-priority water, termed Third Priority (P3). It shares priority with some of the large irrigation districts in Yuma and elsewhere on the mainstream of the Colorado River.



Indian and M&I – Combined, these pools make up the majority of CAP’s long-term contracts. These pools are depicted side-by-side because they are roughly co-equal in priority. There is also some cross-over in use of these supplies, as some tribes lease water to cities.

NIA – This is the Non-Indian Agricultural pool priority that has been allocated, referenced above, primarily available to cities, industries and Tribes.

EXCESS WATER

Ag Pool– Any water available to CAP after satisfying the long-term contract is termed “Excess Water” and the agricultural districts that gave up their long-term contracts via Board Policy have priority access to it.

Other Excess – Any Excess Water available after satisfying the Ag Pool is classified as Other Excess and historically has primarily been used by the Arizona Water Banking Authority , Bureau of Reclamation for federal firming and the Central Arizona Groundwater Replenishment District for Replenishment Reserve firming.

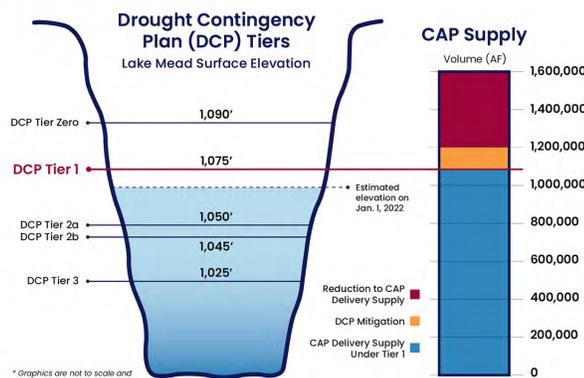
WHY DOES THE CAP PRIORITY SYSTEM MATTER?

There are some differences in cost and other provisions among the priorities, but most importantly, the priorities determine water availability during times of shortage.

In 2020, the Drought Contingency Plan required contributions to Lake Mead. This resulted in a 192,000 acre-foot reduction to CAP supplies. CAP made these required contributions by not delivering “other excess” water and by Intentionally Created Surplus (ICS) creation and conversion of some Ag Pool water.

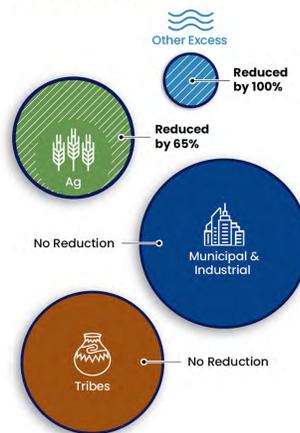
The result of a Tier 1 shortage being declared on the Colorado River is a 512,000 acre feet of combined reductions and required contributions to Lake Mead by CAP. This is more than 30% of the CAP’s historical delivery supply, which significantly affects the next “blocks” down in the chart—the AG Pool and the NIA supply. Some of these impacts will be mitigated based on agreements reached in 2019 in conjunction with the Lower Basin Drought Contingency Plan.

Tier 1 Shortage: CAP Reductions



To learn more, please visit: www.cap-az.com/colorado-river-shortage

2022 Reduction to CAP Users After DCP Mitigation





Colorado River - Havasupai Falls

THE COLORADO RIVER

The Colorado River is the principal water resource diverted for CAWCD and serves as Central Arizona Project water to its customers. CAWCD has recently delivered approximately 1.4 million acre-feet of CAP water to customers in central and southern Arizona annually. Under shortage conditions these deliveries will be reduced in coming years.



Havasupai Falls - Colorado River

The Colorado River is one of the most significant and important rivers in North America. It is approximately 1,420 miles in length. It originates in the central Rocky Mountains in Colorado, and flows almost 246,000 square miles and empties into the Gulf of California in Mexico. The Colorado River Basin includes Wyoming, Colorado, Utah, New Mexico, Arizona, Nevada, California, and the states of Baja California and Sonora, in Mexico.

The Colorado River provides economic and environmental benefits across the western United States and northwest Mexico. It provides renewable water supplies for more than 40 million people in communities across the Basin. The economic output of areas served by the Colorado River is estimated to be in excess of \$1.5 trillion annually or equivalent to the 12th largest Gross Domestic Product (GDP) in the world. The River provides irrigation water to more than 4 million acres of crop lands in the United States and Mexico. The Colorado River Basin is an important agricultural region that includes farms that are the “salad bowl” of the U.S. providing 90% of the nation’s winter vegetable crop. The dams along the River provide clean, renewable electricity, with annual hydroelectric production exceeding 10 million megawatt hours of electricity per year. The River also provides vital environmental values and recreational benefits. The River is home to more than 10 endangered species in the U.S. and Mexico. Further, the River is the centerpiece of several internationally recognized national parks and recreation areas, including: Rocky Mountain National Park, Grand Canyon National Park, Glen Canyon National Recreation Area, Lake Mead National Recreation Area, Dinosaur National Monument, and the Colorado River Delta and Gulf of California Biosphere Reserve in Mexico.



HYDROLOGICAL SCIENCE - IN LANGUAGE FIT FOR A NOVICE OR AN EXPERT

A 2020 article from CAP's Internal Communications - - Know Your Water News - By: DeEtte Person



Whether you're an aspiring hydrologist or a seasoned water manager, there's one reference tool you're going to want on your bookshelf of treasured resources – the new [Colorado River Basin Climate and Hydrology State of the Science Report!](#)

The report was collaboratively funded by CAP and other basin partners – Arizona Department of Water Resources, California's Six Agency Committee, Colorado River Water Conservation District, Colorado Water Conservation Board, Denver Water, Metropolitan Water District of Southern California, New Mexico



Interstate Stream Commission, Southern Nevada Water Authority, Utah Division of Water Resources, Wyoming State Engineer's Office and the U.S. Bureau of Reclamation.

“This document is for anyone to pick up to get a fundamental understanding of the past, current and future climate and hydrology of the Colorado River Basin and how ongoing changes to both are being managed,” says Mohammed Mahmoud, PhD, CAP senior policy analyst. “It's also a document that experts can dive into for specific chapters on topics in which they have a keen interest.”

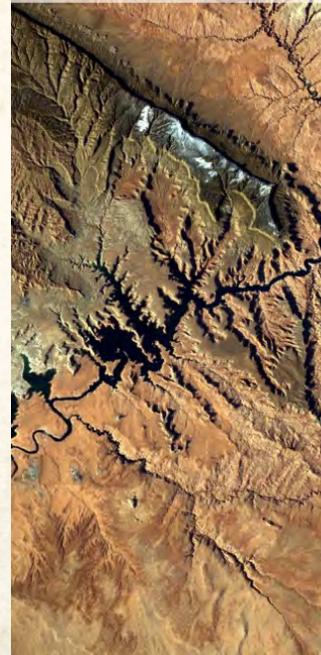
According to the report language, the goal is to “facilitate more accurate short- and mid-term forecasts and more meaningful long-term projections of basin hydroclimate and system conditions.”

In other words, it's a reference document for all – the novice who wants a basic understanding and the expert who wants more nuanced information on methods, tools and data. This common frame of reference is critical as stakeholders begin to determine the future of the

Colorado River Basin in the face of drought and climate change.



Colorado River Basin Climate and Hydrology State of the Science



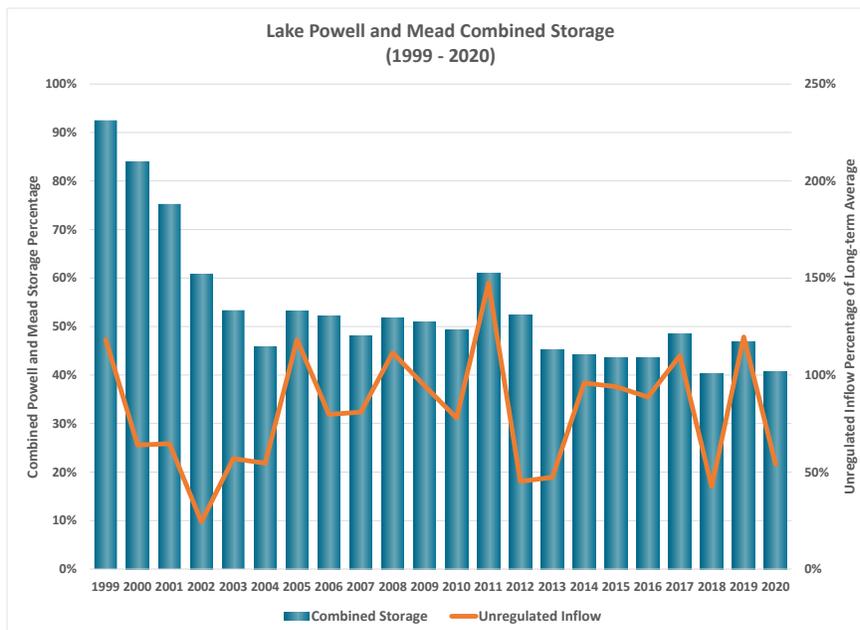
In the face of uncertainty, this State of the Science report couldn't have come at a better time!

The Colorado River is composed of three major river systems: Green River, Colorado River and the San Juan River. The Colorado River is the lifeblood of the CAP system as well as the southwestern United States and Northwest Mexico. The annual natural flow from the Colorado River is estimated to be about 14.8 million acre-feet per year, calculated from the long-term average of measurements beginning in 1906. The Green River, with headwaters in the Wind River Range in western Wyoming, contributes 33% of the annual natural flow; the Colorado River mainstem, with headwaters in Rocky Mountain National Park in Colorado, provides about 42% of the annual natural flow; and the San Juan River, with its origins near Durango, Colorado, provides about 13% of the annual natural flow to the River. Additional flows are provided from numerous smaller tributaries including the Virgin River system in Utah, Nevada, and Arizona, and the Bill Williams River in Arizona.



View from Hoover Dam—Lake Mead

CAWCD is the largest diverter of Colorado River water in Arizona and the second largest Colorado River water user in the system; more than one-half of Arizona’s 2.8 million acre-foot allocation. About one-third of Arizona’s economic production can be tied to delivery of CAP water. Wyoming, Colorado, Utah and New Mexico each have a share of the Upper Basin’s 7.5 million acre-feet of entitlement; however, the Upper Basin routinely only uses about 4.5 million acre-feet annually.



The Colorado River system includes 10 major dams and reservoirs. The backbone of the system is comprised of the two largest reservoirs in North America: Glen Canyon Dam/Lake Powell and Hoover Dam/Lake Mead. These two reservoirs have a combined storage capacity of about 50 million acre-feet. They capture flood flows in wet years and release storage during dry years.

At the end of 1999, the combined reservoir storage of Lake Powell and Mead was almost 95% of capacity or about 47.5 million acre-feet of storage. However, since that time, due to prolonged drought and full use of the system, the reservoir storage has declined to almost 50% of capacity or about 24 million acre-feet of combined storage.

The decline in reservoir storage is the result of fewer high-flow years than in previous decades. In addition, there is a structural deficit in the system, where normal uses exceed normal supplies in most years. The drought, along with the structural deficit, creates risks to the reliability of the Colorado River supply. Since 2014, water users, including CAWCD, have undertaken efforts to reduce the impacts of drought and the structural deficit by reducing uses of Colorado River water. These efforts include system conservation programs where water users are paid to reduce their use of water and leave water in the Colorado River system. In addition, the Colorado River Basin States, the United States, Mexico and key water users including CAWCD, are now implementing the 2019 Drought Contingency Plan. This plan reduces Colorado River diversions to protect critical elevations in Lake Powell and Mead. The plan is working to reduce the near-term and longer-term risks in the Colorado River system.

COLORADO RIVER SHORTAGE

The Arizona Department of Water Resources and Central Arizona Project are taking proactive steps to address Colorado River shortages and improve the health of the river system by



working in collaboration with the Colorado River Basin states, federal government, Mexico, and local and regional partners, which include Tribes, Yuma agricultural and on-river municipal water users in water resource management. Collaboration is focused on reducing the near-term risks caused by the ongoing drought as well as addressing the long-term imbalance between supply and demand on the Colorado River system.

In 2007, to prepare for a possible shortage and to guide Colorado River operations during low

reservoir conditions, the seven Colorado River Basin states and the Bureau of Reclamation completed an agreement clarifying the triggers and anticipated reductions during shortage conditions. This document identified the steps to be taken should a shortage be declared. As part of the Shortage Sharing Guidelines, water levels in Lake Mead and Lake Powell are coordinated to allow more efficient management of the Colorado River supply. Water users across the Basin states continue to work together to promote the benefits of conserving Colorado River water. This agreement runs through 2026.

Frequently Asked Questions:

What is a Colorado River Shortage?

A shortage is an annual reduction in the amount of Colorado River water available to Arizona, Nevada and Mexico and is determined primarily by the elevation of water in Lake Mead. Each month, the Bureau, which manages the Colorado River system, forecasts the elevation of the surface of Lake Mead for the following two years in a document called the 24-Month Study.

A Tier 1 was declared for 2022 when the August 2021 prediction showed the end of December 2021 level to be below 1075'. A high probability of a Tier 2a shortage is predicted for 2023.

Who will be impacted by the Colorado River Shortage?

A near-term shortage will not impact water supplies for Arizona's cities, towns, industries, mines or Tribes using CAP water. It will, however, eliminate CAP water supplies to the Arizona Water Banking Authority (AWBA). It would also reduce a portion of the CAP water supply identified for groundwater replenishment, delivery of water available for agricultural users in central Arizona and causes an increase in CAP water rates. In the face of potential shortage, farmers in central Arizona may choose to offset supply reductions in their CAP supply by using local supplies including pumping groundwater.

Is Arizona prepared for a Colorado River Shortage?

Arizona has been planning for a potential shortage for decades. Since 1996, CAP has worked with the AWBA to store excess CAP water underground to provide back-up supplies for municipal, industrial and Tribal water users. More than twice the amount of the Colorado River water that is delivered to central Arizona annually (3.2 million acre-feet, which exceeds a trillion gallons) has been stored to date. CAP, the ADWR and the AWBA have planned to use these resources to firm CAP M&I subcontracts.



View from Hoover Dam—Lake Mead



Lake Mead & Lake Powell

A LINKED LIFELINE - HOW LAKE POWELL & LAKE MEAD ARE DESIGNED



TO RISE AND FALL TOGETHER

The two largest water supply reservoirs in the United States are part of the Colorado River System - Lake Mead at the Arizona/Nevada border and Lake Powell at the Arizona/Utah border. These two reservoirs are linked by the Colorado River through the Grand Canyon and provide about 90 percent of the system's storage capacity, supplying seven states and Mexico with water.

The enormous storage capacity in these two reservoirs has provided the resiliency to continue Colorado River water supply deliveries during more than two decades of drought. The two lakes also provide vital clean, renewable hydroelectricity used across the western United States, as well as environmental and recreational benefits.

CONJUNCTIVE MANAGEMENT

In order to operate the Colorado River system efficiently and make optimal use of the available storage in these vital reservoirs, the operations of Lake Powell and Lake Mead are coordinated, known as conjunctive



management. In fact, conjunctive management is required by the Colorado River Basin Project Act, which was signed more than 50 years ago to provide a program for the comprehensive development and augmentation of the Colorado River supplies throughout the Upper and Lower Colorado River Basins.

One important goal of coordinated long-term management of these reservoirs is to maintain “as nearly as practicable” equal contents of active storage in Lake Powell and Lake Mead. Lake Mead has about 28 million acre feet (MAF) of storage and Lake Powell can store about 26 MAF.

SHORTAGE SHARING

In 2005, the U.S. Secretary of the Interior directed the Bureau of Reclamation to develop additional strategies for improving the coordinated management of these two reservoirs. The goal was to honor the intent of the Colorado River Basin Project Act, while sharing the water



Glen Canyon Dam

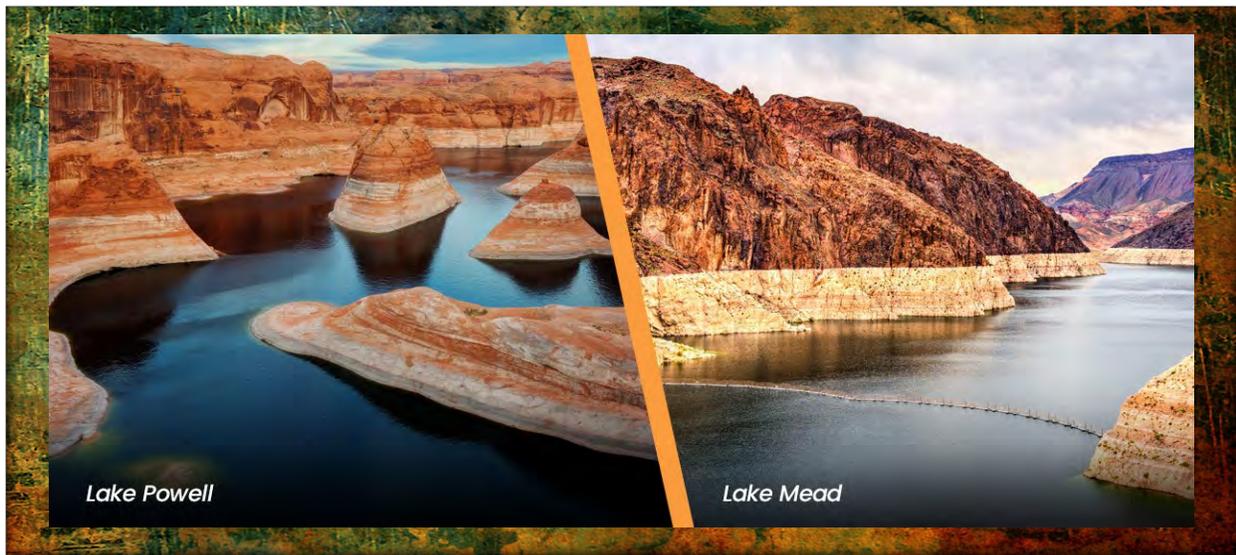
between the Upper (Colorado, New Mexico, Utah and Wyoming) and Lower (Arizona, California and Nevada) Basins during times of lower reservoir levels. The result was the Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead, known as the 2007 Guidelines. These guidelines remain in effect through Dec. 31, 2025.

The essence of this coordinated approach is that releases and reductions will be coordinated to share risks to water users in each basin. Detailed descriptions and definitions can be found in the 2007 Guidelines where further scenario explanations are available.



Lake Powell

24 - MONTH STUDY & A LINKED LIFELINE



WHY DO WATER MANAGERS PAY SUCH CLOSE ATTENTION TO THE 24-MONTH STUDY?

Colorado River water users, like CAP, rely upon operating guidelines related to the amount of water stored in the two major Colorado River Basin Reservoirs – Lake Powell and Lake Mead. The operating guidelines determine how much water will be released from those reservoirs to meet water-user needs. Since 2007, the 24-Month Study has been used to implement the operational decisions directed by the guidelines. We have long understood the risks to Arizona’s Colorado River supplies and have been planning for decades, including the successful efforts to help craft the Drought Contingency Plan for the Colorado River system in 2019.

Each month, the U.S. Bureau of Reclamation (BOR) prepares the 24-Month Study based on hydrologic modeling, including estimates of precipitation, runoff and water uses to forecast operations for these two reservoirs for the next two years. The study considers three hydrologic scenarios, a most likely (“most probable”) condition for system inflow into Lake Powell and releases to Lake Mead, and frequently provides “wetter-case” and “drier-case” scenarios. The study uses these hydrologic scenarios combined with the complex operating rules of the system to generate a dense set of tables containing storage and release values for each of the major reservoirs in the Colorado River system. The results of the monthly study forecast the water supplies for the more than 40 million people served by the Colorado River.

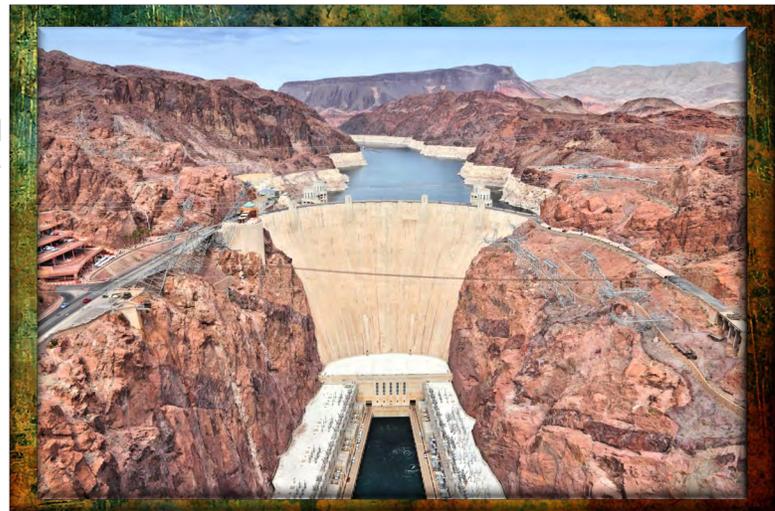
The Colorado River System relies on snowpack as the primary source of its water supply. Consequently, there are two particularly important months where data from the Study gives a clearer indication of what the water supply will be for the subsequent 24-month period:

- In April, at the conclusion of the snow accumulation season, when an accurate projection of runoff from snow melt can be determined.
- In August once the runoff period has fully concluded and the storage contents for the upcoming water year are more fully known.

The U.S. Secretary of the Interior relies on the April Study to evaluate releases from Lake Powell and the August Study to make the Colorado River water supply determination for the upcoming year. Here are the particulars regarding the April and August 24-Month Studies:

APRIL 24-MONTH STUDY

The April 24-Month Study has the best estimate of the likely runoff into Lake Powell, the Upper Basin's primary reservoir. The April 24-Month Study is used to make any necessary adjustments to the previous year's determination of water releases from Lake Powell to Lake Mead. The previous year's determination was made in August (see below) with assumptions about the coming year's snowpack and runoff. In the event the forecasted inflow to Lake Powell from August was too wet or too dry, the April Study is used to make adjustments.

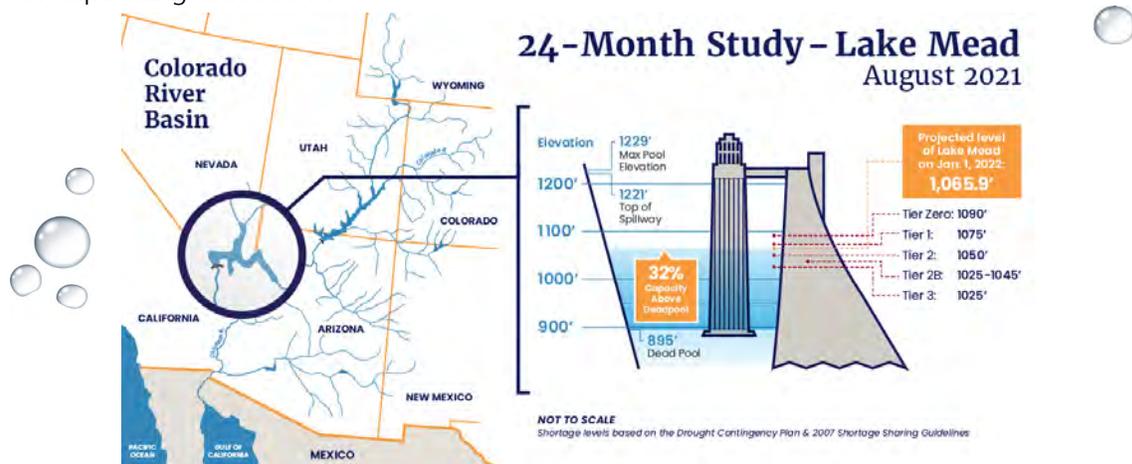


Glen Canyon Dam

The April 24-Month Study is used to make any necessary adjustments to the previous year's determination of water releases from Lake Powell to Lake Mead. The previous year's determination was made in August (see below) with assumptions about the coming year's snowpack and runoff. In the event the forecasted inflow to Lake Powell from August was too wet or too dry, the April Study is used to make adjustments.

AUGUST 24-MONTH STUDY

The August 24-Month Study forecasts the coming year's precipitation, runoff and water uses in the Colorado River Basin. This study is of particular interest because it projects the level of Lake Mead, the Lower Basin's reservoir, at the end of the calendar year. The projected elevation at the end of the year, which reflects the amount of storage in Lake Mead, determines the operating conditions and supply available for Colorado River water users in California, Nevada, Arizona and Mexico. In summary, the projected end-of-year elevation determines whether there is a shortage triggered for the coming year. If Lake Mead is projected to be below elevation 1090', Arizona, and in particular CAP, will face reductions in its available Colorado River supply. When Lake Mead elevation is between 1090' and 1075' there is a Tier Zero reduction, which reduces the supply to CAP by 192,000 acre-feet or about 12%. When Lake Mead elevation is between 1075' and 1050' there is a Tier 1 shortage, with a reduction of 512,000 acre-feet or about 30%. Here you can see the Lower Basin shortage levels and their corresponding reductions.



COLORADO RIVER DROUGHT CONTINGENCY PLAN (DCP)

DCP is a set of agreements designed to protect the Colorado River system through voluntary reductions and increased conservation. The agreements were developed through a collaborative process among the federal government, states, water users and Mexico. The Arizona Department of Water Resources and Central Arizona Project were the participants from Arizona.

There is an Upper Basin DCP involving Colorado, New Mexico, Utah, Wyoming and the U.S.; a Lower Basin DCP involving Arizona, California, Nevada and the U.S.; and a companion agreement which connects these two programs and links them to Mexico through a U.S. -Mexico agreement.



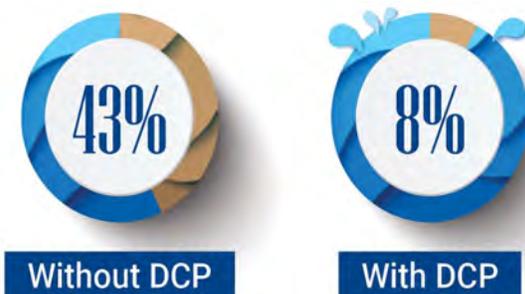
In 2018 and early 2019, ADWR and CAP jointly led nearly 40 stakeholders through months of public and small group meetings. During this process, new arrangements, which form a package called the Arizona DCP Implementation Plan, were negotiated. The package agreements share the burden of impacts from Colorado River reductions and the benefits of increased reliability for Arizona water users.



Arguably Arizona, and CAP specifically, had the most to lose because of its junior priority on the Colorado River, which means its supply would be cut first and most, during times of shortage. There was also uncertainty about what would happen if Lake Mead, the Lower Basin’s principal reservoir, dipped to the very lowest levels. Arizona participated in DCP in order to reduce this risk by sharing reductions with other states and Mexico.

DCP will not prevent a Colorado River shortage, but due to Arizona’s innovative water management programs, conservation and collaborative long-term planning, Arizona will continue to enjoy reliable water supplies. With DCP and Arizona’s water management framework, we are prepared to handle the effects of drought and potential Colorado River shortage.

Risk of Lake Mead going below 1,025’ by the year 2026
(From June 2018 BOR data)

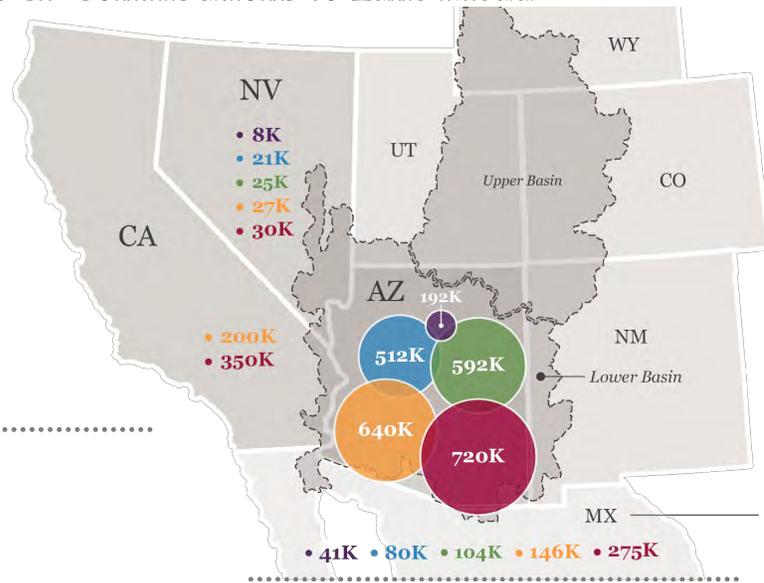


The Drought Contingency Plan Authorization Act was signed into law on April 16, 2019 and reductions to Arizona’s Colorado River supply under DCP began in 2020; and run through 2026. It is anticipated that new rules will be negotiated and put into effect after 2026.

Lower Basin DCP Contributions to Lake Mead

IN ACRE-FEET PER ELEVATION PER YEAR

- Less than 1,090'
- Less than 1,075'
- Less than 1,050'
- Less than 1,045'
- Less than 1,025'

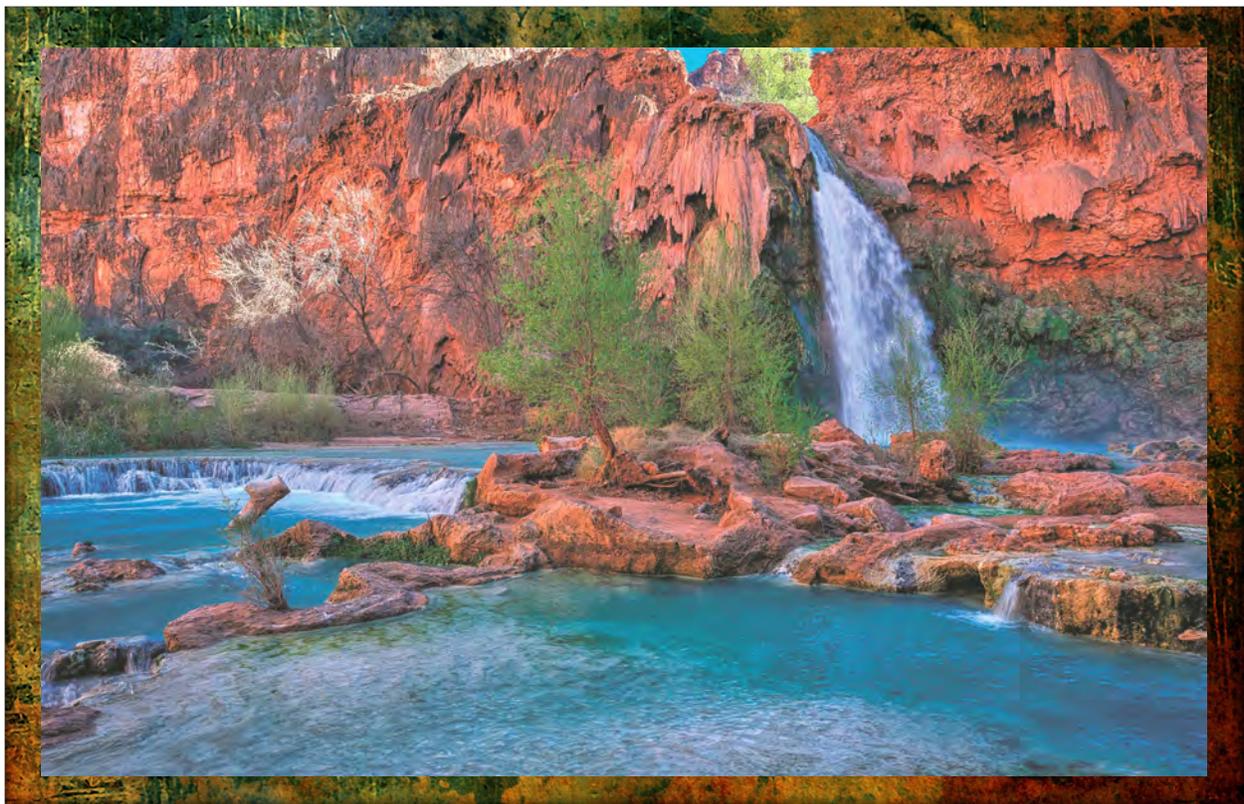


Bureau of Reclamation

• 100K / year

Minute 323
Binational
Water Scarcity
Contingency Plan

The risks of Lake Mead falling below critically low reservoir elevations has tripled in the past decade, increasing the risks of large-scale reductions to Arizona's Colorado River supply and threatening the health of the river for all users. Previous agreements and guidelines designed to protect the system against such dry times may not be sufficient to address the current risks to the system.



Havasupai Falls - Colorado River

COLORADO RIVER SALINITY CONTROL PROGRAM

In 1975, the seven Colorado River Basin states adopted an EPA-approved salinity standard for the Colorado River. This standard provides criteria for dissolved solids and a plan designed to keep the average annual salinity concentrations at or below 1972 levels. Salinity control is important because increased salt levels can limit or prohibit agricultural productivity and add costs to municipal and industrial water users. All Colorado River water users benefit from investments in improved water quality, including those in Mexico.

The Colorado River Salinity Control Program is managed by a partnership of federal and state agencies that have worked cooperatively with Tribal communities, irrigation companies and

individual water users for the past four decades to control the salinity levels of the Colorado River, while allowing development and use of its waters. CAP represents Arizona water users on the Salinity Control Forum, along with the Arizona Department of Water Resources and the Arizona Department of Environmental Quality. Through efforts to date, the salt load of the Colorado River has been reduced by about 1.3 million tons annually. The current plan calls for the creation of an additional 67,000 tons of annual salinity control practices over the next three years.



Colorado River in Arizona



Colorado River in Arizona

Today, the Colorado River currently meets all applicable water quality standards, but the challenge in an era of drought is to protect and maintain that quality going forward. To meet this challenge, CAP, the Metropolitan Water District of Southern California and Southern Nevada Water Authority joined together in 2011 to form the Lower Colorado River Water Quality Partnership. The Partnership works to identify and implement proactive, collaborative solutions to address Colorado River water quality by identifying the

challenges currently facing the River, collaborating on research and policy analysis and developing initiatives and solutions to ensure the River's future health and sustainability.

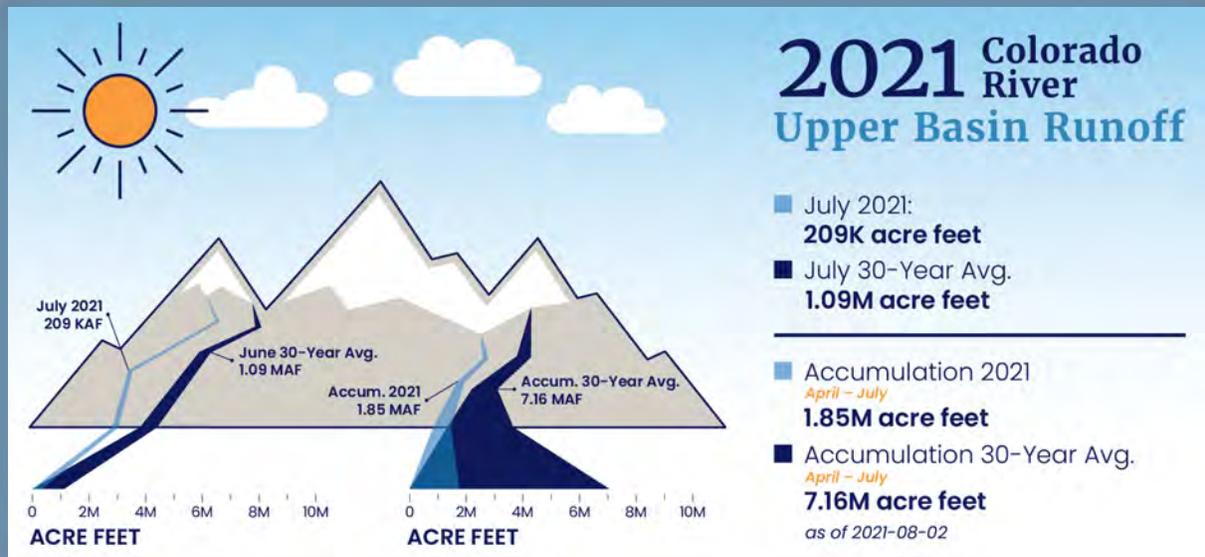


Snow Melt Run-Off — Colorado Spring Mountain Lake

COLORADO RIVER “RUNOFF”



The majority of the winter snow runoff that arrives as inflow into Lake Powell occurs from April through July. In 2021 the unregulated inflow into Lake Powell for this period of April through July was 1.85 million acre-feet, which is about 26% of the 30-year average. Even though the snow accumulation in the Colorado River Basin during the previous winter was just under 70% of the 30-year average, the soil moisture conditions going into the snow accumulation season were extremely dry, which contributed to the low inflows into Lake Powell this year. The current elevations in Lake Powell and Lake Mead together with projected inflows and water uses are resulting in a release of 8.23 million acre-feet from Lake Powell in Water Year (WY) 2021 and 7.48 million acre-feet in WY 2022 and WY 2023. With these lower inflows into Lake Mead, Tier 1 Shortage conditions will occur in 2022 and Tier 2a Shortage is possible for 2023.

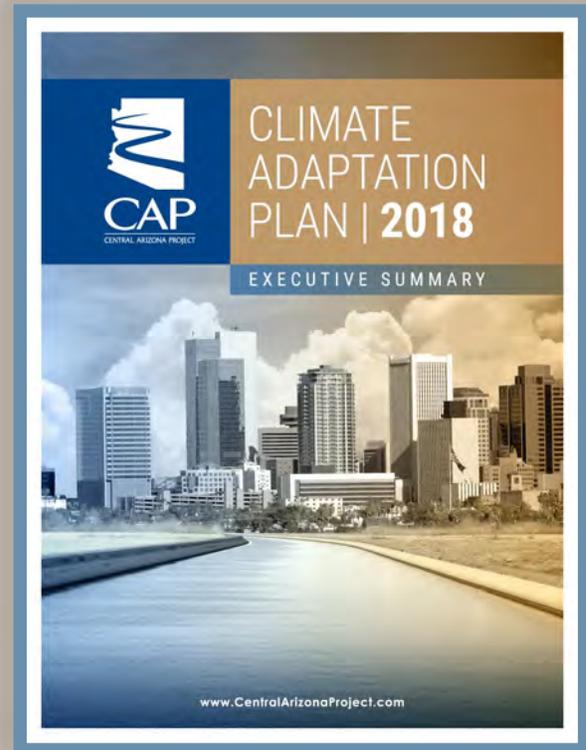


CAP CLIMATE ADAPTATION

CAP has long been involved in adaptation activities that mitigate against drought, including groundwater storage, water augmentation (e.g., weather modifications), and water conservation programs (e.g., pilot system conservation). In addition to these adaptation activities that are directly connected to CAP's water supply, CAP has also funded research projects that improve our understanding of how hydrological and meteorological variables influence water supply conditions and forecasts in the Colorado River Basin.

CAP / ASU NASA-FUNDED STUDY

CAP has partnered with Arizona State University on a NASA-funded study to explore the impacts of future climate on CAP's water supply (the Colorado River). ASU received a \$1 million grant from NASA towards conducting modeling and analysis work that focuses on averting drought shortages in the Colorado River. The end goal of the study is to incorporate new modeling products, tools and enhancements into the existing modeling and analysis used by the CAP. Results from this study will be shared with other Colorado River Basin stakeholders to analyze the impacts of climate change on the Colorado River Basin and therefore inform future decisions regarding the Colorado River as a major supply source in the West.



WATER UTILITY CLIMATE ALLIANCE



CAP is a member of the Water Utility Climate Alliance (WUCA), a coalition of 12 of the nation's largest water providers that collectively supply drinking water to more than 50 million people throughout the United States. WUCA is dedicated to ensuring that water utilities are well-positioned to respond to the impacts of climate change on their water supplies by funding projects, producing publications and hosting workshops that support water utility climate adaptation. WUCA's current membership includes Central Arizona Project, Austin Water, Denver Water, Metropolitan Water District of Southern California, New York City Department of Environmental Protection, Philadelphia Water Department, Portland Water Bureau, San Diego County Water Authority, San Francisco Public Utilities Commission, Seattle Public Utilities, Southern Nevada Water Authority, and Tampa Bay Water. CAP has been serving as WUCA's vice-chair since 2018 and assumed the position of WUCA chair in 2020.

CAP CLIMATE ADAPTATION PLAN



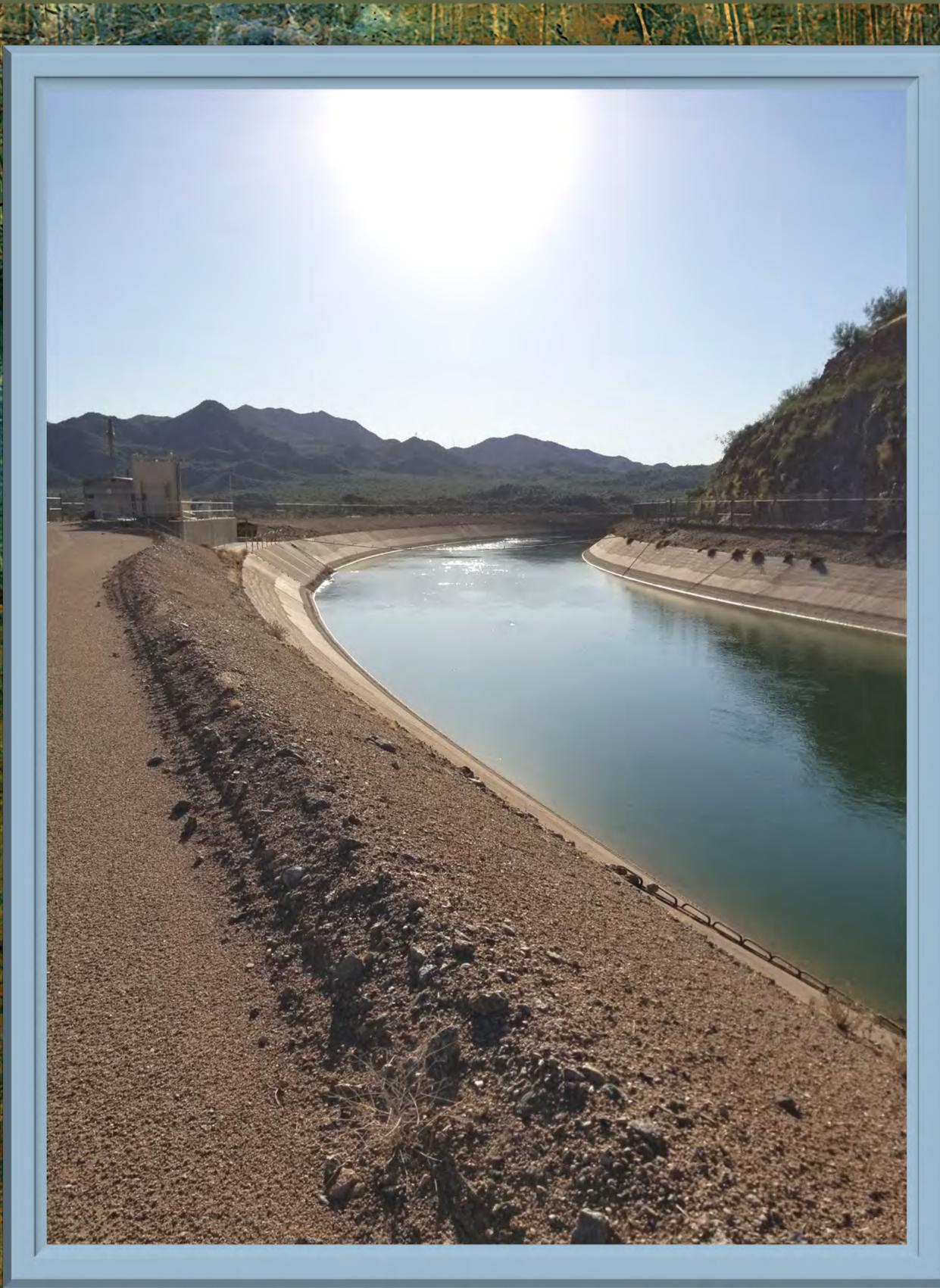
CAP began the process of developing its own organizational climate adaptation plan in 2017. The process began by assembling a team of CAP staff members and CAWCD Board of Directors sponsors who collectively represent key areas of the organization that are vulnerable to current and future impacts of climate change.

Through the remainder of 2017 and 2018, the CAP team worked on developing future planning scenarios, climate change impacts, and adaptation strategies relevant to CAP's strategic planning. The step-by-step process of developing this information and a thorough analysis of the results and the impact on each CAP function were compiled into a comprehensive final report that was published in 2019. The climate adaptation plan provides an assessment of how climate change may impact CAP and identifies adaptation strategies that the organization can undertake to address those impacts.

Sixty-one potential implications of climate change are presented in this report, along with 131 adaptation strategies. Additional in-depth analysis of implications and strategies is recommended to identify and prioritize the most important adaptation strategies. The analysis will be used to support an implementation plan that highlights what strategies should be implemented and how to implement them, along with a plan for monitoring conditions to inform additional future action.

The analysis would be used to assess risk to CAP and form the basis of an implementation plan. Risk could be quantified by assessing the likelihood of implications occurring, the severity of the implications, and the ability to mitigate the implications. Costs and benefits of strategies could be assessed. CAWCD is currently finalizing its climate adaptation implementation plan and anticipates releasing it in late 2021 or early 2022.





Canal Near Salt Gila Pumping Plant—taken by employee Pam Saba

CAP SYSTEM USE AGREEMENT

The Central Arizona Project System Use Agreement, signed by CAP and the Bureau in February 2017, increases the reliability and flexibility of the state's single largest renewable water supply by creating a legal framework to allow wheeling, firming and exchanges in the CAP system.

Wheeling is when the CAP system is used to transport new water supplies; firming refers to the use of water that has been stored underground to increase the reliability of CAP supplies during shortage; and exchanges are arrangements in which a delivery of CAP water is legally swapped with an alternate supply.

Work continues on the implementation of the System Use Agreement, particularly in the establishment of uniform water quality standards for the introduction of Non-Project Water into the CAP system. After extensive public processes, the CAWCD Board adopted introduction and delivery standards for non-Project Water. CAP is also developing an expanded water quality and monitoring program, along with implementation guidelines. Water quality is a critical component of several wheeling projects under consideration, including proposals to import groundwater from the Harquahala Irrigation Non-Expansion Area.



CAWCD Board of Directors & Bureau

The System Use Agreement has also played a prominent role in planning efforts related to the recovery of the more than four million acre-feet of CAP water stored by the Arizona Water Banking Authority. The provisions related to exchanges of non-Project Water for Project Water are particularly relevant to cost-effective methods for implementing recovery utilizing existing infrastructure and partnerships.

By establishing an overall framework, the System Use Agreement will allow the CAP infrastructure to be used in more efficient and innovative ways. Those innovations are crucial to the success of efforts by CAP and state water agencies to manage risks from drought and shortages on the Colorado River.

CAP REVENUE SOURCES

CAWCD collects revenues primarily through the sale of water, through collection of property taxes, and through interest on investments held at the Arizona State Treasurer's office. The CAWCD Board establishes water delivery rates at a level to operate, maintain, repair, and replace CAWCD infrastructure. CAWCD also operates several underground storage facilities or recharge sites and collects revenues from those customers that utilize the sites to cover the costs of operating the facilities. In addition, CAWCD collects rates, fees and dues from CAGR customers that have joined the CAGR as a means to meet their assured water supply requirements. CAGR finances are maintained separate from CAWCD's core business finances.

CAWCD is authorized to assess two property taxes:

- A general ad valorem tax can be assessed up to \$0.10 per \$100 of assessed valuation in Maricopa, Pinal and Pima counties
- A water storage tax can be assessed up to \$0.04 per \$100 of assessed valuation

Proposition 117 took effect in tax year 2015, which established that a property's net assessed valuation (NAV) will be taxed based on the Limited Property Value (LPV). This proposition limits the annual growth in the LPV of all locally assessed property to 5%.

Tax Year July-June	Maricopa County NAV/LPV (\$M)	% Growth	Pinal County NAV/LPV (\$M)	% Growth	Pima County NAV/LPV (\$M)	% Growth	Total NAV/LPV (\$M)	% Growth
2017	\$38,252	5.9%	\$2,239	5.6%	\$8,075	3.3%	\$48,566	5.4%
2018	\$40,423	5.7%	\$2,355	5.2%	\$8,334	3.2%	\$51,113	5.2%
2019	\$43,194	6.9%	\$2,521	7.0%	\$8,730	4.8%	\$54,446	6.5%
2020	\$45,704	5.8%	\$2,689	6.7%	\$9,140	4.7%	\$57,535	5.7%
2021	\$48,724	6.6%	\$2,869	6.7%	\$9,696	6.1%	\$61,289	6.5%
2022	\$51,593	5.9%	\$3,053	6.4%	\$10,275	6.0%	\$64,921	5.9%
2023	\$54,461	5.6%	\$3,246	6.3%	\$10,800	5.1%	\$68,507	5.5%
2024	\$57,347	5.3%	\$3,457	6.5%	\$11,334	4.9%	\$72,137	5.3%
2025	\$60,401	5.3%	\$3,686	6.6%	\$11,896	5.0%	\$75,983	5.3%

Sources: CAP; Maricopa County; Pinal County; Pima County; Elliott D. Pollack & Company (April 2021)



ECONOMIC IMPACT OF CAP TO ARIZONA

The CAP has supported Arizona's gross state product (GSP) with \$2 trillion in economic benefits since water deliveries began. The GSP represents the dollar value of all goods and services produced in the region and is a measurement of the economic output of a state. This economic impact supports 22 sectors of the Arizona economy related to gross state product and job-years of employment.

The study's analysis demonstrated the growing importance of CAP for the

State of Arizona economy. CAP's establishment and subsequent delivery of water to municipal, industrial, and agricultural customers in the three central AMAs has had a crucial impact on the economic development of the state.

The purpose of the study was to calculate the economic impact of CAP for the State of Arizona, assessed in terms of GDP by State and employment, in three aspects:

- The construction of CAP 1973-1993;
- The impact of CAP's water supply delivery operations, 1986-2017; and
- The impact of CAP's inhouse operations, 2011-2017

It is important to note that the study did not take into account additional benefits associated with CAP, such as the 10,000 acre, Lake Pleasant Park, the Reach 11 recreation area in Phoenix, or the TPC golf course and Westworld in Scottsdale. The inclusion of these would have in all probability increased the estimated economic value of CAP's water delivery in Arizona during 1986 through 2017.

The study estimated that the annual importance of CAP's water supply to statewide GDP is greater than 40% from 2011 onwards. In addition, the analysis estimated that the GDP would have been cumulatively lower by approximately \$2.0 trillion between 1986 and 2017, if CAP had not been established, and the availability of water for municipal, industrial, and agricultural customers had declined accordingly. This represents a loss of approximately 28.2% of cumulative statewide GDP throughout the study period.

THE TOP FIVE SECTORS estimated to be impacted the most in terms of contribution to GSP since water deliveries began are:



GOVERNMENT
\$335.2 billion



HEALTHCARE
\$302.1 billion



REAL ESTATE & TRAVEL
\$286.6 billion



RETAIL
\$187.9 billion



CONSTRUCTION
\$187.0 billion

IN RECENT YEARS

Colorado River water delivered by CAP has supported an economic benefit exceeding

\$100 BILLION PER YEAR



ARIZONA'S GROSS STATE PRODUCT



CAP's supply of water to its customers in **2017** is estimated at annual employment of nearly **1.6 MILLION JOBS.**



Arizona Desert

DISTRICT FUNDS



Central Arizona Project (CAP) accounts for its activities by means of four separate funds and accounts. Each fund and account represents a separate activity that has its own sources and uses of cash. Within each, revenues and expenses are further divided between operating and non-operating categories. These funds and accounts are further explained in the Operating Budget, Section 4. The following key assumptions provide the framework and guidance for development of the 2022 / 2023 Biennial Budget. The assumptions and trends are discussed in the sections that follow:

General Fund

Largest share of Central Arizona Water Conservation District (CAWCD or District) financial activities that include water deliveries, maintenance, underground water storage, federal debt repayment, capital spending and other daily operations

Assumptions

- Water revenues are based on reconciled rates of estimated costs and projected water volumes
- Tax and capital charge revenues are based on current Board approved rates and distributions
- Sufficient funds are included in the budget to ensure that all capital facilities and equipment are properly maintained
- No contingency amount is included in the budget

CAGR D Account

All activity of the Central Arizona Groundwater Replenishment District (CAGR D) for Member Service Areas (MSA) and Member Lands (ML) revenue collections, water replenishment obligations and related operating expenses

Assumptions

- CAGR D rates include components for the cost of replenishment water, replenishment reserve, water rights, infrastructure and administration
- Membership dues will be collected each year
- Replenishment obligation expense is based on the anticipated cost of supplies to fulfill obligation

Supplemental Water Account

Reserves that are held pursuant to the Ak-Chin Water Rights Settlement to acquire or conserve Colorado River Supplies

Assumption

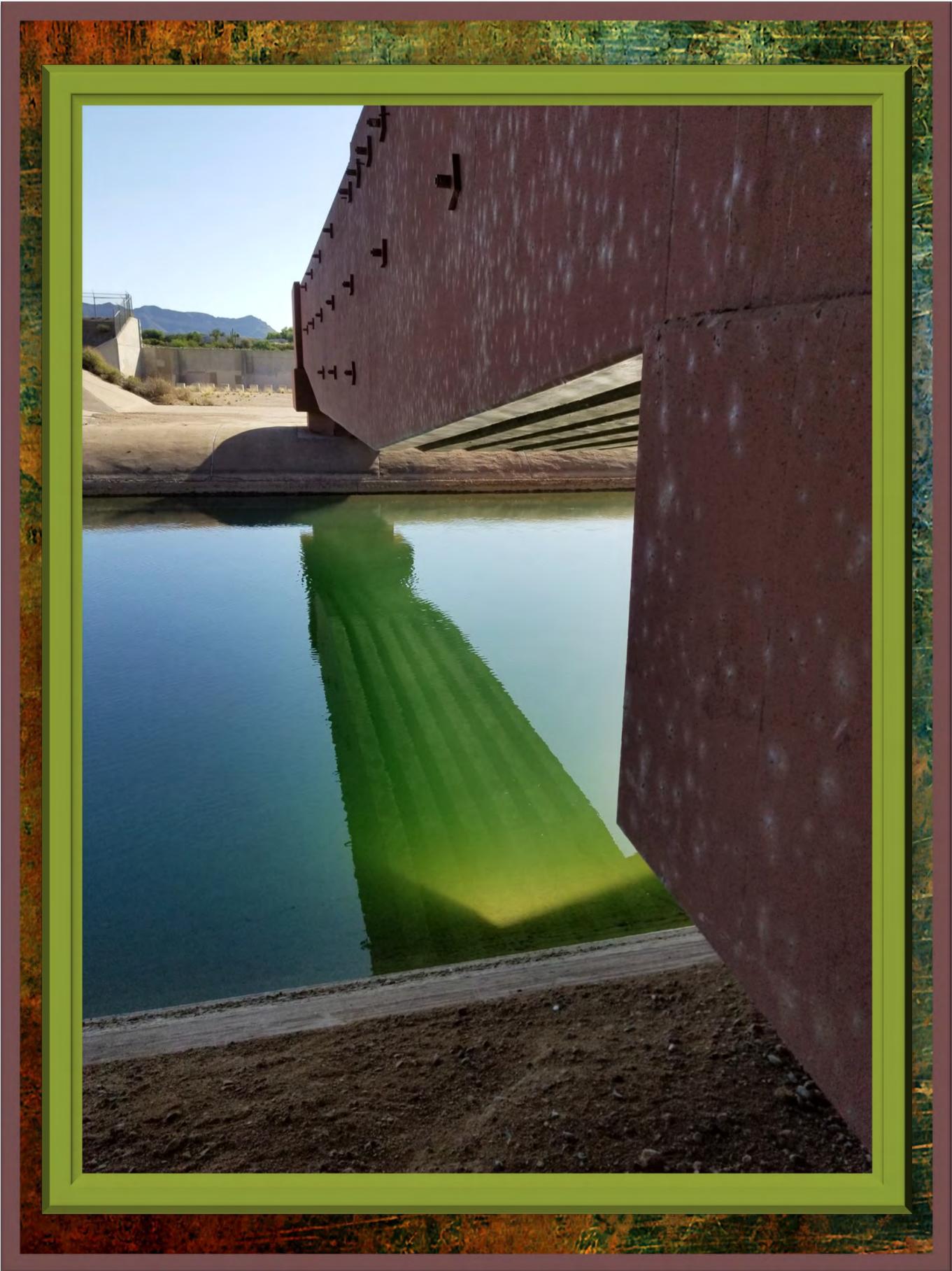
- Interest accrues on the reserve balance and there are no anticipated costs during the budget period

Captive Insurance Fund

All activity for the CAWCD Insurance Company (Captive), a tax-exempt wholly-owned corporation for CAWCD's self-insurance of property, casualty and health coverage

Assumptions

- Premiums will be established based on actuarial estimates
- Reserves will be funded in accordance with legal requirements



Red Mountain freeway just north of McDowell Rd — Taken by CAP Employee Pam Saba

DISTRICT REVENUES

CAWCD has four major sources of funding:

Water O&M charges

Capital charges

Power and Basin Development Fund (BDF) revenues

Property taxes

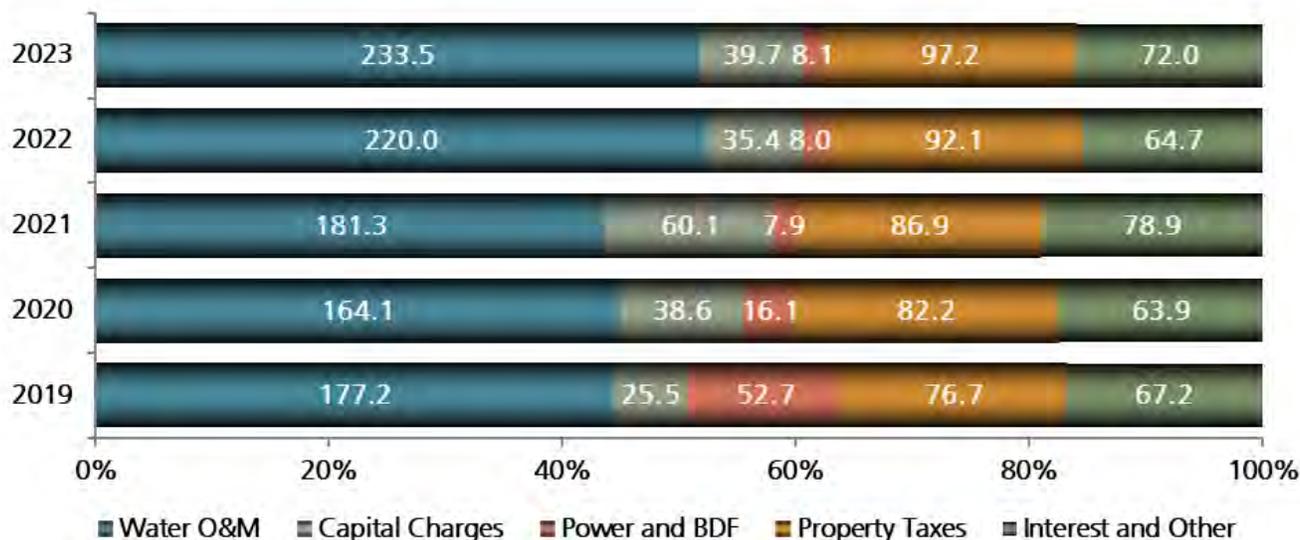
Interest income and other revenues

Water O&M charges are the District's most significant revenue source, accounting for approximately 52% of the 2022 / 2023 Budget. Property taxes comprise approximately 22% of revenues, with the balance comprised of capital charges, Power and Basin Development Fund (BDF) revenues, interest income and other Revenues. Other revenues includes Central Arizona Groundwater Replenishment District (CAGR) charges, interest income, underground water storage fees, reimbursements and interest income.

Each fund and account is accounted for individually to determine the performance of the specific activities within that fund. At the consolidated level, inter-fund activities are eliminated. For instance, CAGR purchases water from CAP to meet its obligations. Within the General Fund it is shown as a revenue or sale of water while in the CAGR account it is shown as an expense. At the consolidated level, the transaction is eliminated, which is shown under eliminations.

Total Revenue

(\$ Millions) - 100% scale



The following table shows the year-over-year revenue changes and are explained in the subsequent sections:

(\$ Millions)	2021 Projection	2022 Budget	2023 Budget	22 vs 21 Incr/(Decr)	23 vs 22 Incr/(Decr)
Water O&M Charges	\$ 181.3	\$ 220.0	\$ 233.5	\$ 38.7	\$ 13.5
Capital Charges	60.1	35.4	39.7	(24.7)	4.3
Power & Other BDF	7.9	8.0	8.1	0.1	0.1
Reimbursement	65.6	56.9	63.8	(8.7)	6.9
Property Taxes	86.9	92.1	97.2	5.2	5.1
Interest Income	13.3	7.8	8.2	(5.5)	0.4
<i>Total Revenues</i>	\$ 415.1	\$ 420.2	\$ 450.5	\$ 5.1	\$ 30.3

WATER O&M CHARGES

Water Volumes

The delivery of wholesale, untreated surface water represents CAWCD's core business with deliveries to customers grouped into three major classes: Municipal and Industrial (M&I), federal (Indian) and excess. The M&I and federal deliveries are pursuant to long-term federal contracts and long-term M&I subcontracts. Any amounts not delivered under these agreements are available as excess water under annual short-term agreements. The highest priority of excess water is the agricultural (Ag) settlement pool, which was established pursuant to the Arizona Water Settlement Act (AWSA).

The AWSA established a pool for Ag customers as a settlement for relinquishing their long-term CAP subcontract allocations so that water supply could be used for Indian water settlement. The Ag Settlement pool was 256,143 acre-feet delivered in 2019, but declined to 42,000 acre-feet in 2022 under Tier 1. No delivery is expected in 2023 under Tier 2a. CAWCD has various rate schedules for these customer classes (see page 7-3). Ag subcontractors were relieved of certain indebtedness to the United States. Part of this relief was in the form of debt forgiveness by the United States, and part of the relief was the assumption of a portion of the debt (known as 9(d) debt) by CAP. In addition, Ag customers do not pay Fixed Operations, Maintenance and Replacement (OM&R) as part of the AWSA, which is referred to as the Ag Consideration.

CAWCD has an "Access to Excess" policy for the allocation of excess water. In developing the Annual Operating Plan (water deliveries):

- CAWCD shall first use available CAP excess water to fully satisfy the Ag Settlement Pool. Any remaining CAP excess water is "Other Excess".
- CAWCD will then use Other Excess to satisfy commitments associated with the Water Availability Status Contract with the City of Scottsdale, not to exceed 2,910 acre-feet.
- CAWCD will then use Other Excess to satisfy the difference, if any, between the most recent year of reported CAGR replenishment obligation, and the volume of renewable supplies available for replenishment (excluding Long Term Storage Credits (LTSCs), up to a limit of 10,000 acre-feet per year.

- The Board will further make an annual decision whether to make additional Other Excess available to the Statutory Firming Pool. If the Board decides to make Other Excess available, it will be apportioned among the Arizona Water Banking Authority (AWBA), Bureau and the CAGRDR based on an annual coordination meeting among the three organizations.
- The Board may further establish a Supplemental Firming Pool, comprised of any Other Excess available after satisfying the Statutory Firming Pool. This pool will be made available at the same charge and on the same terms to federal and non-federal long-term contractors holding non-Indian Agriculture (NIA) priority supplies on a proportional basis until all orders are satisfied or the available supply is fully subscribed.
- CAWCD can provide up to 35,000 acre-feet to meet CAGRDR annual replenishment obligations.
- All remaining Excess Water goes to the Statutory Firming Pool.

State law, ARS 48-3772(E)(8), provides that the CAGRDR replenishment reserve shall have access to excess CAP water equivalent to that of the AWBA for firming CAP M&I subcontracts.

Due to the ongoing drought, structural deficit and Drought Contingency Plan (DCP) implementation, water available to CAWCD has decreased. In addition, as M&I and federal water usage has grown, the availability of excess water has decreased significantly.

Major Assumptions

- In 2022, CAWCD planned deliveries are based on a Tier 1 DCP level, which includes a total reduction of 512,000 acre-feet of deliveries.
- In 2023, CAWCD planned deliveries are based on a Tier 2a DCP level, which includes a total reduction of 592,000 acre-feet of deliveries.
- The Ag Settlement Pool is reduced to 42,000 acre-feet in 2022 under Tier 1 and is fully eliminated in 2023 under Tier 2a.
- No other excess water is made available during the budget period.

Water Deliveries

Acre-Feet (000)
Excludes credits



Water O&M Charges

As prescribed in CAP's rate-setting policy, water O&M rates are set biennially in June (even years) for the upcoming two calendar years with firm rates for the first year, provisional rates for the second year and advisory rates for the following four years. Provisional rates automatically become firm the next year, unless the Board takes additional action. In 2020, CAP set the provisional rates for 2022. Due to changes with energy market forecasts, transmission costs and water volumes, the Board revised the 2022 rates as well as the advisory rates in 2021. During the rate setting period, there appeared to be a high likelihood of a Tier 1 shortage in 2022 so all rates from 2022 to 2026 were revised to a Tier 1 shortage. Other Tier level shortages were also provided as a reference. Subsequently, based on the January 1 projected level of Lake Mead at 1,065.85 feet above sea level, the U.S. Secretary of the Interior did declare the first-ever Tier 1 shortage for Colorado River. In addition, it is projected that there will be a Tier 2a shortage in 2023. The previously approved advisory rates for 2023 were revised be a Tier 2a to develop the 2022 / 2023 budget. The updated rates can be found in the Rate Schedules in the Appendix (pages 7-3 through 7-6).

Due to the correlation between water delivery volumes and water delivery charges, assumptions used to explain water delivery volumes are pertinent for understanding water delivery revenues. The following table reflects actual water deliveries and associated revenues for 2019 and 2020 and water delivery volume assumptions and related revenues for 2021 through 2023.

Water Operation & Maintenance (O&M) rates have two major components: Fixed OM&R, and pumping energy. Each of these components is discussed in the subsequent sections. Following are the water volumes and water delivery revenues:

	2019 Actual	2020 Actual	2021 Projection	2022 Budget	2023 Budget
Volume (<i>Acre-feet in Thousands</i>)					
Municipal & Industrial	593.7	608.1	607.6	665.4	654.3
Federal	443.2	482.4	489.1	515.3	440.5
Ag Settlement	256.1	255.4	256.1	42.0	-
Other	21.4	78.9	0.6	0.6	0.6
Total Water Deliveries	1,314.4	1,424.8	1,353.4	1,223.3	1,095.4
CAGR Credit Transfer	33.2	5.1	15.2	15.2	16.3
Take or Pay/Adjustment	26.0	11.4	6	6	6
Total Water Volume	1,373.6	1,441.3	1,374.6	1,244.5	1,117.7
Revenues (<i>Millions</i>)					
Total Water O&M Charges	\$ 177.2	\$ 164.1	\$ 181.3	\$ 220.0	\$ 233.5

Fixed OM&R Rate Component

The Fixed OM&R component of the rate is comprised of two parts: O&M costs and a capital replacement component (“Big R”). The O&M costs are calculated to assume that costs associated with fixed O&M are recovered. Water delivery costs are divided by total deliveries to calculate the O&M rate. Since costs are fixed, as deliveries decrease, the rate per acre-foot increases and vice versa.

The “Big R” component funds annual major repairs, replacements and capital improvement programs (CIP) related to water deliveries. However, to mitigate fluctuations in annual capital spending, the model is designed to smooth the rate and to recover the costs over several years rather than 100% in each year.

In consideration for giving up their subcontract water rights, Ag settlement pool stakeholders’ Fixed OM&R is paid from property taxes. Since tax revenue is recorded when levied, water O&M revenue is not recorded on Ag Settlement pool deliveries. With the reduction and elimination of the Ag Settlement pool, more Water O&M revenue is recorded on those deliveries that are delivered to long term contract holders.

Pumping Energy Rate Component

The pumping energy rate component relates to the energy costs associated with delivering water. All customers pay pumping energy, including Ag customers. With the decommissioning of the Navajo Generating Station (NGS) in 2019, all energy is provided through long-term contracts, the energy market and Hoover (see pages 2-15 through 2-16 for additional energy information). The use of energy is variable and as deliveries decrease, the total energy cost and subsequently the revenue also decrease. The rate per acre-foot, however, remains fairly consistent.

Major Assumptions

- 2022 and 2023 Water O&M revenues are projected to be the indicated volumes and at reconciled rates for long-term contracts and subcontracts.
- 2022 and 2023 water delivery levels will be at the levels indicated on page 7-1.

CAPITAL CHARGES

Capital charges are used to pay the District’s annual repayment obligation to the federal government for building the CAP. CAWCD assesses a capital charge to M&I customers based on subcontract allocations for M&I subcontractors and are not impacted by water delivery volumes. Neither federal or Ag customers pay a capital charge.

Customers using excess water pay capital charges in the form of a facility-use charge based on scheduled water deliveries. Any repayment obligation amount not covered by capital charges are made up from property taxes.



Non-Indian Agricultural Reallocation

Through 2020, CAWCD held 96,295 acre-feet of NIA priority rights that had been set aside for future allocation to M&I users. These NIA priority rights were recorded as an asset of CAWCD at \$88.7 million. In exchange for the relinquishment, CAP incurred a 9(d) debt liability related to loans that had been made to the irrigation districts, which was recorded as an \$88.7 million liability.

The first recommended reallocation of 46,629 acre-feet is anticipated to occur in 2021 for delivery in 2022. Of these, CAGR D will receive 18,185 acre-feet. Upon reallocation, the District will collect charges from the M&I users, an amount sufficient to repay the District's costs in facilitating the payment of the 9(d) debt. These funds will be deposited into a restricted reserve that will be utilized when the repayment begins in 2026 (see appendix (page 7-14).

As a result of this reallocation, the District will record a write-down of the NIA asset of \$26.2 million in 2021 for the reallocation that is to M&I users. In addition, the District will receive back-capital charges for these acre-feet of \$24.8 million and interest of \$12.1 million. The District is offering a 5-year payment option to the recipients, with the first payment due in September 2021 and then in equal installments for the next 4 years. The future installment created an increase in receivables of \$37.5 million in 2021. The acre-feet allocated to CAGR D will have impacts in the individual funds and accounts, but are eliminated at the District level.

Major Assumptions

- M&I Capital Charge and facility use rates will be \$50/acre-foot for 2022 and \$56/acre-foot for 2023.
- There will be no facility use charges during the budget period.
- The NIA reallocation occurs in 2021 and all transactions are recorded in that period.

POWER AND BASIN DEVELOPMENT FUND REVENUES

CAP is a multi-purpose water resource project authorized by the Colorado River Basin Project Act and constructed by the Bureau. This act established the Lower Colorado River Basin Development Fund (LCRBDF or BDF) maintained by the U.S. Department of the Treasury. Although the District is responsible for the operation and maintenance of CAP and repayment of the reimbursable construction costs, the United States retains a paramount right or claim in CAP arising from the original construction of CAP as a Federal Reclamation Project. The District's right to the possession and use of all revenues produced by CAP is evidenced by the Master Repayment Agreement, various laws and other agreements with the United States. Legal title to CAP will remain with the United States until otherwise provided by Congress.

Power & BDF revenues are earned from a surcharge on energy sold in Arizona from the Hoover Power Plant and the Parker-Davis Project, net transmission revenues, revenues associated with land-use agreements, sale of excess lands and other miscellaneous revenue. A significant amount of revenue in previous years was generated through excess NGS power sold to SRP and the open market, which ended with the closure of NGS in late 2019.



Major Assumptions

- Hoover 4.5 mil surcharge and Parker Davis revenue will continue throughout the budget period
- Transmission revenues will occur as indicated and include transmission losses
- Land sale proceeds and land use fees will occur as indicated

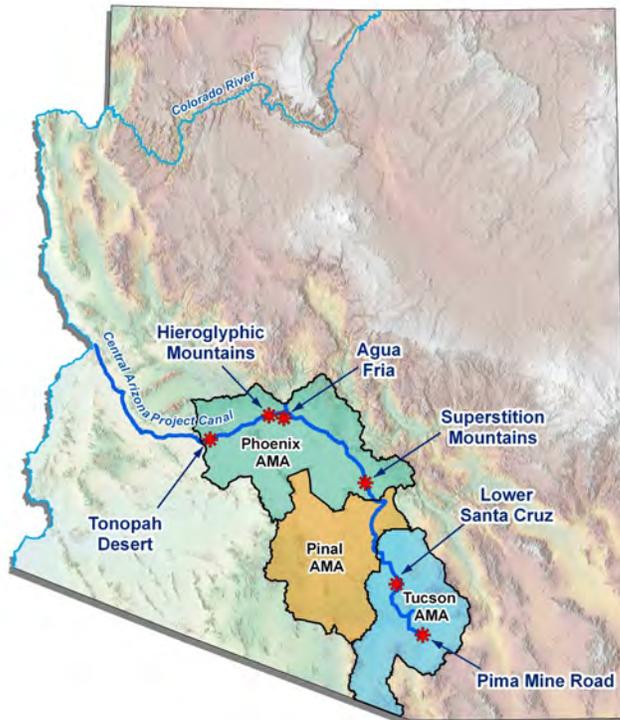
Following are the Power & BDF Revenue year-over-year changes:

<i>(Millions)</i>	2021 Projection	2022 Budget	2023 Budget	22 vs 21 Incr/(Decr)	23 vs 22 Incr/(Decr)
Hoover 4.5 Mil Revenue	3.4	3.1	3.2	(0.3)	0.1
Parker-Davis 4.5 Mil Revenue	2.8	2.9	2.9	0.1	-
Net CAP Transmission Revenues	(1.4)	(1.0)	(1.0)	0.4	-
Land-Related Revenue	0.8	0.8	0.8	-	-
Misc NGS Revenues	2.3	2.2	2.2	(0.1)	-
	\$ 7.9	\$ 8.0	\$ 8.1	\$ 0.1	\$ 0.1

REIMBURSEMENT AND OTHER REVENUES

Reimbursements and other revenues account for various miscellaneous items, such as CAGRD charges, underground storage revenue and Captive revenues. Other revenues collected by CAWCD or expenses reimbursed to CAWCD by other entities are recorded in this category. The following are examples of the type of revenues included in this category:

<i>(Thousands)</i>	2021 Projection	2022 Budget	2023 Budget	22 vs 21 Incr/ (Decr)	23 vs 22 Incr/(Decr)
CAGRD Assessments	\$ 63,873	\$ 55,125	\$ 61,803	\$ (8,748)	\$ 6,678
O&M of Underground Storage Facilities	1,544	1,354	1,630	(190)	276
Land Use Charges	11	165	174	154	9
Property Disposal (Non-Capital)	-	2	-	2	(2)
Captive Insurance Premiums	11,042	11,706	12,702	664	996
Other	270	360	340	90	(20)
Eliminations	(11,111)	(11,842)	(12,825)	(731)	(983)
Total Reimbursements and Other Revenues	\$ 65,629	\$ 56,870	\$ 63,824	\$ (8,759)	\$ 6,954



**CAWCD Underground Storage
Operational Capacity**
320,000 Total
Acre-Feet

Pima Mine Road	30,000
Lower Santa Cruz	50,000
Agua Fria	30,000
Hieroglyphic Mountains	35,000
Tonopah Desert	150,000
Superstition Mountains	25,000

CAP Underground Storage Facilities

Underground Storage

CAWCD, through previous State Demonstration Tax proceeds (predecessor to the water storage tax) and some general ad valorem tax proceeds, built several underground storage sites, sometimes called recharge sites.

These sites continue to serve a variety of purposes, including: storing excess water to allow the AWBA to create long term storage credits toward meeting its M&I firming goal; providing stakeholders the ability to store unneeded entitlement for self-firming; as well as providing a means to replenish water for CAGRDR obligations.

Since the underground storage facilities (USF) were constructed using State Demonstration Project tax revenues and general ad valorem tax revenues, when entities other than municipal, AWBA and CAGRDR (e.g., federal, industrial, etc.) utilize them, an underground water storage Capital Charge is assessed to recover the costs of constructing these facilities.

AD VALOREM TAXES

CAWCD is authorized to collect two ad valorem property taxes. Tax rates are set annually for the next tax year by the Board on or before its August meeting.

General Ad Valorem Tax

The District’s enabling legislation authorizes levying a general ad valorem tax throughout CAWCD’s three-county service area (Maricopa, Pinal and Pima counties), not to exceed \$0.10 per \$100 of Net Assessed Valuation (NAV) based on Limited Property Values (LPV). These taxes have been used for CAP federal debt repayment, Ag Consideration, recharge capital spending, smoothing project O&M spending and other Board-approved programs. This general ad valorem property tax was first levied beginning in the 1974 / 1975 tax year.

In June 2021, the Board set the 2021 / 2022 General Ad Valorem tax rate to \$0.10 and designated that \$0.075 of this tax be set aside in an Extraordinary Cost reserve until such time that the Board authorizes its use. This reserve will be utilized to help address the many significant costs looming, particularly related to shortage mitigation. The Extraordinary Cost reserve is not part of strategic reserves and requires Board approval prior to use.

The General Ad Valorem tax, net of the amount designated for the Extraordinary Cost Reserve, is deposited in the District’s working capital reserves and utilized for authorized purposes.

Water Storage Tax

In 1996, the Arizona state legislature created the Arizona Water Banking Authority and the Arizona Water Banking Fund for purposes of increasing Arizona’s use of its Colorado River entitlement. The legislation also authorized CAWCD to levy a water storage tax at a rate of \$0.04 per \$100 of NAV in Maricopa, Pinal and Pima counties based on LPV. Arizona Revised Statutes (ARS) §48-3715-03.A provides that the Board shall determine whether any or all portion of the water storage tax is to be applied toward the repayment of CAP construction or operating costs. If these monies are not needed by CAWCD for these purposes, they must be transferred to the AWBA.

Tax Years (collected October- September)	General Ad Valorem Tax (per \$100 NAV)	Water Storage Ad Valorem Tax (per \$100 NAV)
1984-88	\$ 0.07	N/A
1988-95	0.10	N/A
1995-00	0.10	\$0.04
2000-03	0.09	0.04
2003-07	0.08	0.04
2007-13	0.06	0.04
2013-22	0.10	0.04
2022-24	0.10	0.04

Calendar Year	General Ad Valorem Tax (Millions)	Water Storage Ad Valorem Tax (Millions)	Total (Millions)
2019	\$ 54.7	\$ 22.0	\$ 76.7
2020	58.6	23.6	82.2
2021	63.3	23.6	86.9
2022	65.6	26.5	92.1
2023	69.3	27.9	97.2

In 2014, ARS § 45-2423 was revised, allowing the AWBA to purchase LTSC. The Board subsequently approved an amendment to the existing Intergovernmental Agreement (IGA) among CAWCD, AWBA and Arizona Department of Water Resources (ADWR) that governs the way in which \$.04 taxes can be used to help pay for such purchases. The Board will continue to establish the Water Storage Tax rate and a resolution on its use each June under the existing statutes. In June 2021, the Board set the 2021 / 2022 Water Storage tax rate at \$0.04 and retained all but \$7 million for operations and repayment. The \$7 million will be transferred to the AWBA for purchases of LTSC.

Process for Long Term Storage Credit Purchases

AWBA and CAP staff meet in May to discuss AWBA’s draft Annual Report and the projected Water Storage Tax revenue. By May, AWBA will identify in its draft Annual Report the amount of revenues it will seek from the CAWCD Water Storage Tax for the purchase of the projected volume of LTSCs for M&I firming during the following calendar year. In June, staff will bring the water storage tax resolution to the Board, which includes a request to transfer the identified amount to the AWBA. As the AWBA Commission approves a purchase for M&I Firming LTSCs, AWBA will submit the agreement to staff for reimbursement up to the Board’s approved level.

AWBA activities generate underground storage credits for the purposes of firming CAP M&I water supplies. Since 2012, the Board has designated the funds for federal repayment and OM&R costs, which includes AWBA M&I firming.

AWBA LONG-TERM STORAGE CREDIT PURCHASE PROCESS



Property Tax Equivalency

Entities that are outside of the three-county area pay a property tax equivalency charge that is equivalent to taxes paid by entities within the CAP delivery area. These proceeds are transferred to the state Water Protection fund as required by statute.

Major Assumptions

- The general ad valorem tax rate will remain at \$0.10 per \$100 of NAV throughout the budget period. \$0.075 will be dedicated to the Extraordinary Cost reserve.
- The water storage tax rate will remain at \$0.04 per \$100 of NAV throughout the budget period.

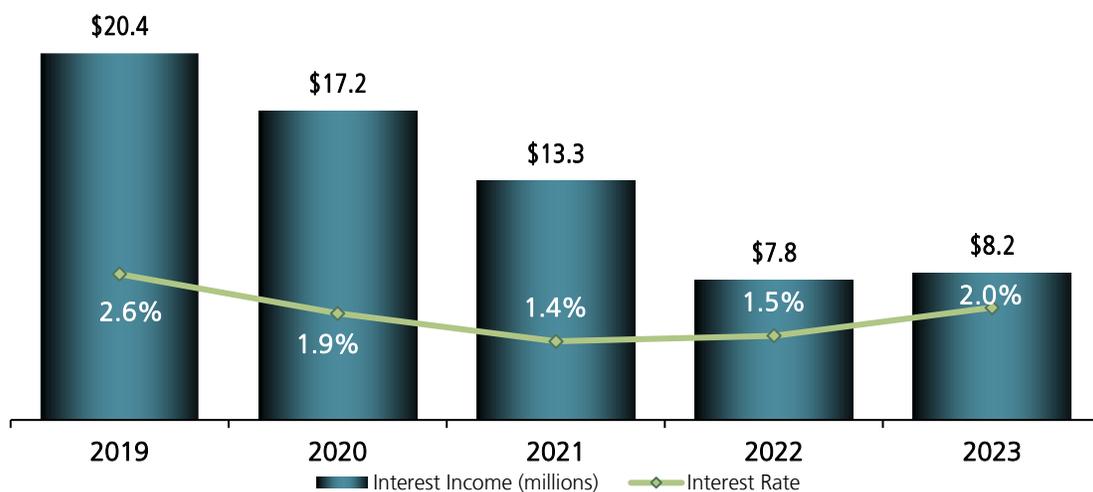
INTEREST INCOME

CAWCD is required by its enabling legislation to invest funds not currently needed for operations or dedicated to the repayment of revenue bonds with the Arizona State Treasurer. Funds invested earn interest and this interest is recorded in the appropriate accounts. The Captive funds are held at First Hawaiian Bank. CAWCD also receives interest on funds that are held in the BDF fund by the Bureau.

The following graph shows the historical and projected Interest and fair value (FV) adjustments as well as the average annual interest rate on investments at the Arizona State Treasurer.

Major Assumption

- Interest rates for funds invested with the Arizona State Treasurer will be an average of 1.75% in 2022 and 2023 based on approximately 13% short-term investments (under 1 year) and 87% longer term investments (2-5 years).
- Interest will be paid on the annual NIA reallocation payments at 2.5%.



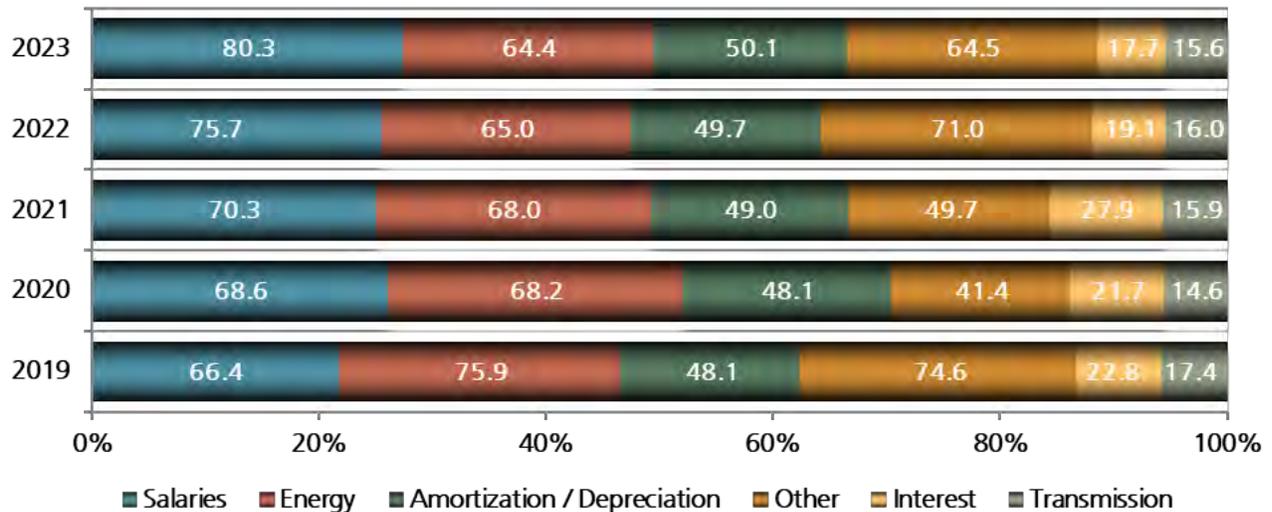
DISTRICT EXPENSES

District expenses are categorized as either operating or non-operating expenses. Operating expenses include pumping energy, salaries and related costs, amortization and depreciation and other operating costs. Non-operating expenses are associated with interest expense on the federal repayment obligation and bonds and disbursements to AWBA.

Salaries and related costs is the District’s most significant expense, accounting for approximately 26% and 27% of the 2022 and 2023 budget, respectively. The second largest expense is the pumping energy, followed by other operating costs, amortization and depreciation, transmission and interest expense. The large 2021 other non-operating expense was the recording of the NIA reallocation write-down of over \$7.2 million. The following table shows the year-over-year expense changes which are explained in the subsequent sections:

Total Expenses

(\$ Millions)- 100% scale



(Millions)	2021 Projection	2022 Budget	2023 Budget	22 vs 21 Incr/(Decr)	23 vs 22 Incr/(Decr)
Salaries & Related Costs	70.3	75.7	80.3	5.4	4.6
Pumping Energy	\$68.00	\$65.00	\$64.40	(\$3.00)	(\$0.60)
Amortization & Depreciation	49.0	49.7	50.1	0.7	0.4
Other Operating Costs	39.4	63.4	64.0	24.0	0.6
Interest and Other Non-Operating Expense	38.2	26.7	18.2	(11.5)	(8.5)
Transmission	15.9	16.0	15.6	0.1	(0.4)
	\$280.8	\$296.5	\$292.6	\$ 15.7	\$ (3.9)

PUMPING ENERGY

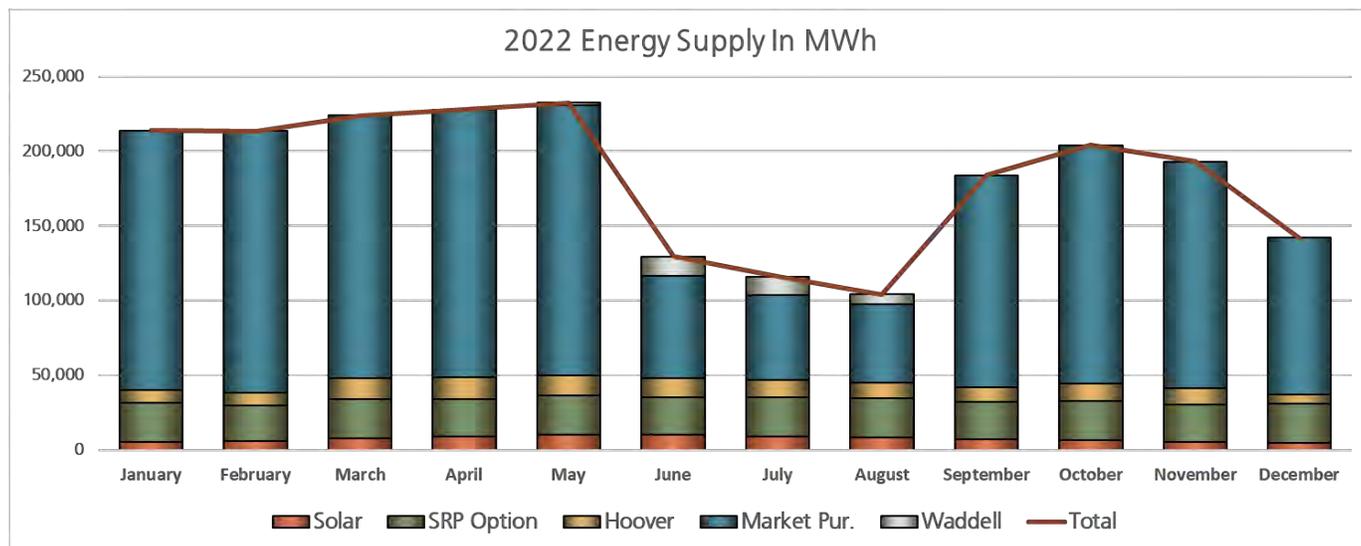
The greatest variable affecting water delivery expenses is the cost of pumping energy. While most General Fund operating costs (Fixed OM&R) will not vary with water deliveries, the cost of electricity to pump CAP water does vary. Pumping energy is consequently a variable cost. CAWCD anticipates using 2,185 gigawatt hours (GWh) of energy in 2022 and 2,088 GWh in 2023 to meet the District's pumping needs.



Power Lines in Arizona

CAP has developed a diversified power portfolio. Currently, almost 80% of total CAP energy needs are obtained from market purchases. The remaining energy comes from a long-term contract for Hoover Dam generation, a power purchase agreement (PPA) for energy from a 30 megawatt (MW) solar plant, a PPA with an Arizona utility for 35 MW of firm energy from their fleet of generation, and the hydroelectric generation resulting from releasing water from Lake Pleasant.

CAP schedules energy use and develops pumping strategies that most efficiently fulfill customers' requests by using the system's 109 pumps. Although CAP runs 24 hours a day, schedulers utilize an on-peak/off-peak energy schedule to maximize pumping during off-peak times when energy is less in demand and less expensive.



The District established an Energy Risk Oversight Committee (EROC) that acts as an advisory committee on a variety of energy and transmission-related issues affecting CAP operations. The District uses a portfolio approach for managing CAWCD's contract energy resources and transmission contracts. This approach focuses on designing a portfolio of projects that best meet the following guiding principles:

Minimizing volatility in cost paid by CAWCD without sacrificing reliability

Maintaining options for use of transmission

Leveraging use of existing transmission infrastructure

Willingness to commit capital to secure new transmission

Due to current market conditions, forward energy prices are elevated but per CAP's hedging strategy, the majority of forward energy targets have been purchased for 2022. Total energy purchased for 2023 is less than half, but the focus will be on forward purchases on off-peak hours as the on-peak energy needs can be covered by existing resources.

CAWCD can increase or lower the water stored in Lake Pleasant to meet CAP operational needs. When water is pumped into the lake increasing the storage, CAWCD increases water inventory and reduces pumping energy costs. Conversely, when water is released from the lake, water inventory is decreased and pumping energy costs are increased.



Power Lines in Arizona

Major Assumptions

- Long-term contracted power is available at \$38.58/MWH in 2022 and \$37.07/MWH in 2023.
- Market purchases made at an average of \$25.11/MWH in 2022 and \$27.87/MWH in 2023.
- Lake adjustments occur as indicated in the energy section of the Appendix (page 7-7).

TRANSMISSION

Transmission cost includes operations (delivery of pumping energy) and maintenance activities.

Major Assumptions

- Similar to the energy markets, transmission rates are projected to increase during the budget.
- CAP will maintain its contractual agreement with Western Area Power Authority (WAPA) for transmission line maintenance.

SALARIES AND RELATED COSTS

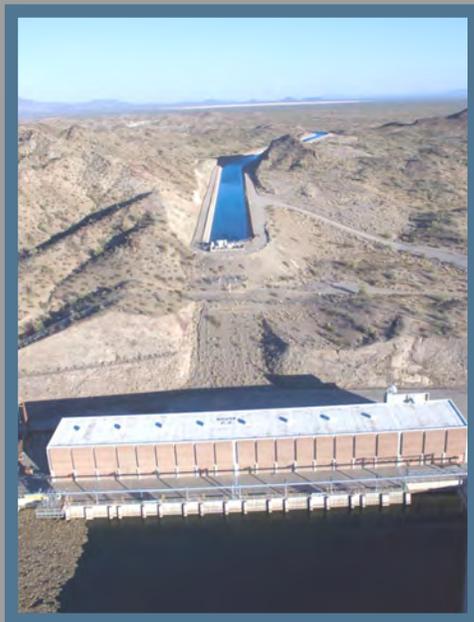
Salaries and related costs are the District's largest expense category. CAWCD's workforce is projected to be comprised of 489.5 full-time equivalent (FTE) positions for the 2022 / 2023 budget period. CAGR has a staff of 9 FTEs that are dedicated to CAGR operations and the rest are dedicated to CAP operations. Of these, about one-third are assigned to the pumping plants and other locations along the aqueduct and the balance are assigned to Headquarters in Phoenix. Approximately 70% of CAWCD's workforce is dedicated to the core water delivery business, including water delivery activities, capital projects and extraordinary maintenance projects.

Two positions were added in 2021, the Public Affairs Analyst and Water Control Dispatcher Trainee. There are no new FTE additions in the 2022 / 2023 budget from 2021 levels, though it is anticipated some vacant positions will be filled. Salaries and related costs are projected to increase as a result of filling of vacant positions, a shift of work from capital to operating projects (in 2021) and a budgeted 5% merit increase, which is based on current market surveys. Open positions are reviewed to determine the most effective and efficient manner to fill the needs of that position and are evaluated on supporting the strategic objectives of CAP. Open positions and the lag time in filling those positions create a vacancy savings equivalency of approximately 15 FTEs in recent years, which is included in the budget. The Organizational Summary section includes details on the District's organizational structure and FTE detail.

Major Assumptions

- No new positions are requested in the budget period, and include a factor for vacancy / salary savings equivalent of 15 FTEs to reflect turnover and retirements.
- Include an average merit increase of 5% per year to maintain a competitive compensation and benefits package.

AMORTIZATION AND DEPRECIATION



Bouse Pumping Plant

Amortization - The permanent service right (PSR) is an asset that represents the District's right to use the CAP system and collect revenues from operations, for which the District has incurred a repayment obligation to the United States.

Depreciation - The District records a depreciation expense for capital equipment additions and replacements and for capital projects. It is anticipated that this expense will increase each budget year.

Major Assumptions

- Record an amortization expense related to the PSR, which is approximately \$23.0 million for 2022 and \$21.8 million for 2023.
- Include depreciation of \$26.7 million for 2022 and \$28.3 million for 2023.

INTEREST EXPENSE

CAWCD pays interest on the federal repayment obligation and its bonds. CAWCD has 2 revenue bond issues outstanding: Series 2016 bonds relating to transmission projects and CAGR 2019 bonds relating to CAGR water acquisitions. The CAWCD Series 2016 bonds were sold at a premium and there is an annual amortization of the premium that decreases interest expense. Detailed debt schedules are contained in the appendix (page 7-12 through 7-13). Note the federal repayment is made in January but the interest expense for the payment is recorded in the prior year.

Major Assumptions

- Federal debt interest expense is \$17.7 million for 2022 and \$16.4 million for 2023.
- CAWCD bond interest expense is \$1.1 million for 2022 and \$1.1 million for 2022.
- CAGR bond interest expense is \$0.3 million for 2022 and \$0.2 million for 2023.
- CAWCD bond amortization is \$0.7 million for 2022 and \$0.6 million for 2023.

OTHER EXPENSES

This category represents the remainder of the District's operating expenses. Operating expenses include outside services, materials and supplies, CAGR water purchases and other business-related expenses (e.g., property and casualty insurance, rentals and Multi-Species Conservation Program expense). Transactions from internal sales and expenses such as water that CAGR purchases and self-insurance premiums that the General Fund pays to the Captive Insurance Fund are eliminated at the consolidated level. Board elections occur every other year in even years and is one of the larger variances when comparing year-over-year. CAGR replenishment obligation expense is the largest item in other expenses. A significant increase facing the District is the increase in its insurance coverage outside of the Captive. The market is seeing significant increases and CAWCD is anticipating to see increases of 20-25%.

<i>(Thousands)</i>	2022 Budget	2023 Budget
Re-consultation on Colorado River Guidelines	\$ 100	\$ 50
Data Analytics Initiative	\$ 550	\$ 550
Weather Modification & Climate Change	\$ 470	\$ 470
Board Elections	\$ 1,130	\$ -
Binational Conservation Project (BICS)	\$ -	\$ 1,670
Irrigation Conservation Research (Ndrp)	\$ 85	\$ 85
Insurance Program-Property & Casualty	\$ 2,485	\$ 3,142

2022 / 2023 Budget Initiatives

The following list provides some key unique initiatives or expenses during the budget period. These initiatives are included in costs that are included in the Fixed O&M rate:

<i>(Thousands)</i>	Funding Source	2022 Budget	2023 Budget
Conservation Initiatives	Extraordinary Cost Reserve	\$ 7,460	\$ 8,016
Visitor Center Preparation Costs	Extraordinary Cost Reserve	\$ -	\$ 260
Regional Recycled Water with MWD	Water Storage Tax	\$ 1,000	\$ 1,000
Recovery Planning	Recovery Reserve	\$ 3,230	\$ 3,750
Extraordinary Maintenance	'Big R'	\$ 4,204	\$ 2,572
Wheeling Costs	System Use Reserve	\$ 95	\$ 20

Also included in the budget are several initiatives that are included in the District's expenses but anticipated to be funded from other sources. These items are excluded from the Fixed O&M rate calculations. Any items that are funded from the Extraordinary Cost Reserve will be brought to the Board for approval prior to executing. In the event the Board chooses to include the items in the Fixed O&M rate, the rate would increase from what this budget indicates. In the event the Board chooses to not move forward on the initiative, the item would not be utilized and cause an expense variance.

Compensated Mitigation

The Arizona Implementation Plan for the Drought Protection Plan includes compensating some long-term contract holders for reducing their water deliveries. In turn, CAWCD will contribute water and/or Intentionally Created Surplus Credits (ICS) in an amount that when combined with the compensated mitigation payments will not create an increase to the Fixed OM&R rate. The amount of the compensated mitigation and the contributed water/ICS are dependent on the year of shortage, the level of shortage and the actual amount of water ordered. Exact amounts will be determined in late October to early November each year. The compensated mitigation is included in the outside service costs and causes a significant increase on that line item. As the Board has approved this program and it is contractual, exact amounts may cause variances on actual expenses and water volumes but will not impact rates.

Major Assumptions

- The budget includes amounts to fund activities to support the Board's 2022 Strategic Plan.
- The General Fund's budget includes amounts for proper maintenance of facilities and equipment.
- The CAGR Account includes appropriate amounts to meet its replenishment obligation and support its water acquisition program.
- The Captive Insurance Fund expenses are determined through actuarial calculations.
- Key initiatives are included and executed and funded from sources as identified.
- Compensated mitigation payments and CAWCD water/ICS included as follows:
\$14.7 million and 113.5 thousand acre-feet in 2022
\$12.7 million and 88.1 thousand acre-feet in 2023
- Include MWP Suction Tubes & BHS Right Manifold Reline project for \$4.2 million in 2022 and \$2.6 million in 2023 as Extraordinary Maintenance programs.

DISBURSEMENTS TO ARIZONA WATER BANK AUTHORITY

CAWCD utilizes the water storage tax to support the AWBA in purchasing LTSCs and in paying its administrative costs. These transfers are recorded as Disbursements to AWBA.

Major Assumptions

- In 2022, disbursements to AWBA include \$7.0 million for LTSC purchases and \$0.5 million for administrative costs.
- In 2023, no disbursements for LTSC purchases and \$0.5 million for administrative costs. All other water storage tax proceeds will be retained to be applied to CAP OM&R costs and repayment.



Colorado River



CAPITAL SPENDING

Along with the District’s right to use the aqueduct system, CAWCD is responsible for the maintenance, repair and replacement of its equipment and infrastructure. This responsibility entails a capital improvement plan that may add to the existing asset base, improve or extend the life of existing assets or replace assets as they wear out. In addition, there are ongoing capital spending for vehicles and other equipment. CAWCD has a capitalization policy to determine whether major maintenance efforts should be capitalized or expensed as repairs. Capital spending will vary year-to-year dependent on the projects being executed and available resources. Costs related to the CIP are summarized in the following table:

<i>(\$ Millions)</i>	Equipment	Capital Projects	Total
2019	1.8	24.3	26.1
2020	3.7	29.3	33.0
2021	2.7	29.4	32.1
2022	5.2	32.9	38.1
2023	5.1	36.8	41.9

Detail on each capital improvement project and a detailed equipment list is located in the Capital Budget section (see pages 5-9 through 5-39).

New projects scheduled to start during the 2022 / 2023 budget period include:

- Discharge Valves at Bouse Hills, Little Harguhala & Hassayampa Pumping Plants
- Elevator System Replacement (Phase 3)
- Fire Protection at San Xavier, Twin Peaks, Sandario, Brawley, Tucson Field Office Phase 2
- HVAC Replacement Headquarters Building 2
- Motor Exciters at Twin Peaks, Sandario, Snyder Hill & Black Mountain

Major ongoing projects post 2022 / 2023 budget period include:

- Backup Power System Replacements at Checks & Turnouts, and Microwave sites.
- Condition-Based Monitoring
- Electromechanical Relay Replacement Phase 2
- SCADA Replacement at Control Center

Major projects that are scheduled to be completed in the 2022 / 2023 budget period include:

- Fire Protection System Upgrade Mark Wilmer Pumping Plant
- HVAC Replacement at Mark Wilmer Pumping Plant
- Motor Exciters & Control Unit Replacements at West Plants
- Transformer McCullough

Major Assumptions

- Projects must be approved by the Project Steering Committee (PSC).
- Capital equipment over \$100,000 must be supported by a financial/business case analysis.
- Fleet vehicles require a financial analysis to ensure the vehicles are being utilized as intended by CAWCD’s fleet vehicle policy.

STRATEGIC RESERVES

Strategic Reserves are not a single fund, but rather a collection of individual accounts that have been established for a variety of specific purposes. They are cash reserves for unusual or unplanned events, such as equipment failures, business interruption or unplanned costs. These reserves may be drawn upon if unusual or unplanned events occur, or they may never be used at all.

In 2020, as part of its biennial review of strategic targets, the Board revised its strategic reserve target to \$153 million. A review will be conducted in 2022 and the target may be adjusted as appropriate. Strategic reserves are projected to be at target of \$153 million for 2022 and 2023.

WORKING CAPITAL RESERVES

Working capital reserves are available for daily operational needs. They are used to smooth out timing differences in revenues and spending within the year as well as across years. Water rates and other charges are set in such a way as to allow CAWCD to cover its costs and maintain adequate reserve levels. It is impossible to precisely break even every year due to the uncertainties associated with water volume and rate reconciliations. In addition, fluctuations in capital spending as compared to the “Big R” revenue collection will also cause working capital reserves to fluctuate year-to-year.

In 2020, the Board established a working capital reserve target of \$51 million. The 2022 review may adjust this target also. The working capital reserves are forecasted to be above budget at \$145 million, though the Board determines tax rates annually and may modify the rate or direct it to another purpose. Budget assumptions are made that tax rates remain at current levels until the Board determines a change. The tax assumption, the receipt of back capital charges on the NIA reallocation and the decrease of taxes being used for the Ag Settlement pool deliveries Fixed OM&R are the cause of the increase.



OTHER RESERVES

The District maintains several special purpose reserves in addition to the strategic reserves (see pages 3-41 through 3-44). For this reason, even though net position may increase, the cash for the items driving the increase is deposited into these special purpose funds such as the water storage tax reserve and the CAGR reserves, and consequently does not result in an associated increase in working capital reserves.

SELECTED FINANCIAL DATA

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

All Funds

(Millions)

	2019	2020	2021	2022	2023
	Actual	Actual	Projection	Budget	Budget
Operating Revenues	\$ 302.2	\$ 265.5	\$ 314.9	\$ 320.3	\$ 345.2
Operating Expenses	(277.8)	(234.5)	(242.6)	(269.8)	(274.4)
Operating Income/(loss)	24.4	31.0	72.3	50.5	70.8
Non-operating Revenues	97.1	99.4	100.2	99.9	105.4
Non-operating Expenses	(27.4)	(28.1)	(38.2)	(26.6)	(18.3)
Total Non-operating Revenues/(Losses)	69.7	71.3	62.0	73.3	87.1
Change in Net Position	94.1	102.3	134.3	123.8	157.9
Cumulative-effect of change in accounting principles	0.0	0.0	0.0	0.0	0.0
Net Position at Beginning of Period	694.0	788.1	890.4	1,024.7	1,148.5
Net Position at End of Period	\$ 788.1	\$ 890.4	\$ 1,024.7	\$ 1,148.5	\$ 1,306.4



NET POSITION SUMMARY

All Funds

(Millions)

By an order of magnitude, the largest amounts of Net Position are the federal repayment liability and the corresponding permanent service right asset. Following is a summarized Statement of Net Position. Detailed statements can be found on pages 4-7 through 4-9.

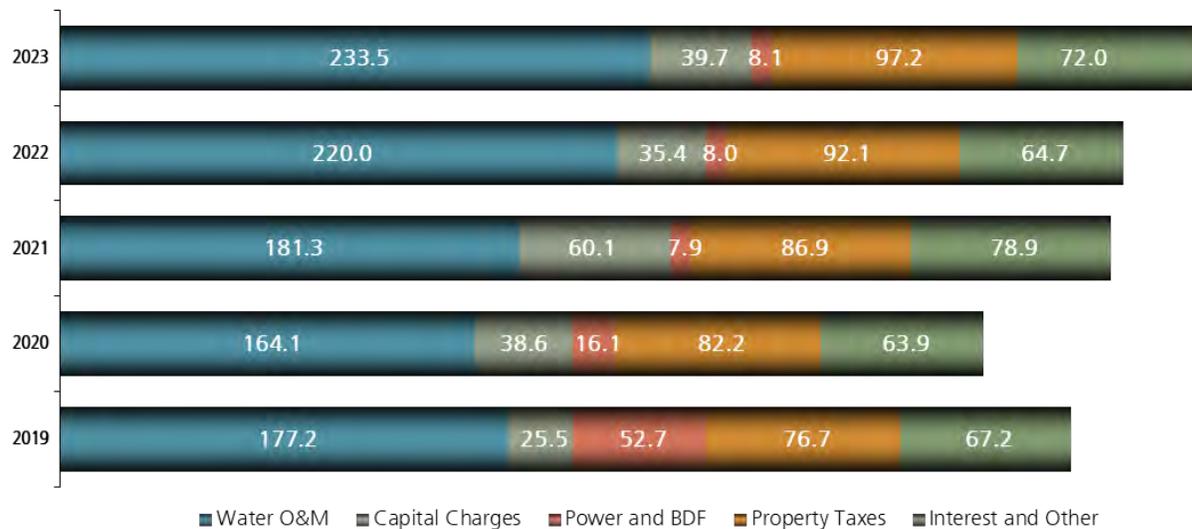
	2019	2020	2021	2022	2023
	Actual	Actual	Projection	Budget	Budget
Assets					
Cash and investments	\$ 421.3	\$ 537.6	\$ 579.7	\$ 633.3	\$ 714.4
Receivables	59.3	54.4	102.0	94.9	97.9
Water inventory	206.2	215.7	229.6	236.0	242.4
Capital assets					
Operating assets, net	297.9	305.9	331.3	343.4	357.6
Permanent service right, net	1,065.8	1,042.8	1,019.8	996.8	975.1
Agricultural water allocation	88.7	88.7	45.8	45.8	45.8
Other Assets	150.8	116.0	119.5	131.6	147.7
Total Assets	2,290.0	2,361.1	2,427.7	2,481.8	2,580.9
Deferred Outflow of Resources					
Pension valuation	9.1	18.2	18.2	18.2	18.2
Total Deferred Outflow of Resources	9.1	18.2	18.2	18.2	18.2
Total Assets & Deferred Outflow of Resources	\$ 2,299.1	\$ 2,379.3	\$ 2,445.9	\$ 2,500.0	\$ 2,599.1
Liabilities					
Repayment obligation	\$ 1,043.9	\$ 983.2	\$ 942.9	\$ 937.5	\$ 897.1
Bonds	66.6	90.5	91.9	50.9	44.8
Non-Indian agriculture 9(d) debt	88.7	88.7	88.7	88.7	88.7
Other liabilities	252.0	264.0	230.2	220.6	219.5
Total Liabilities	1,451.2	1,426.4	1,353.7	1,297.7	1,250.1
Deferred Inflow					
Customer deposits	43.2	52.1	57.1	43.4	32.2
Pension valuation	16.7	10.4	10.4	10.4	10.4
Total Deferred Inflow	59.9	62.5	67.5	53.8	42.6
Net Position					
Investment in Capital Assets, less related debt	251.2	273.0	329.1	360.9	396.1
Restricted	75.1	75.6	88.1	101.6	118.8
Unrestricted	461.7	541.8	607.5	686.0	791.5
Total Net Position	788.0	890.4	1,024.7	1,148.5	1,306.4
Total Liabilities, Def Inflows & Net Position	\$ 2,299.1	\$ 2,379.3	\$ 2,445.9	\$ 2,500.0	\$ 2,599.1

TOTAL REVENUES

(Millions)

	2019	2020	2021	2022	2023
	Actual	Actual	Projection	Budget	Budget
General Fund Operating					
Water O&M charges	186.5	172.7	189.1	234.5	248.7
Water service capital charges	28.1	39.9	77.2	36.7	41.0
Power & BDF revenues	52.7	16.1	7.9	8.0	8.1
Other revenue	2.2	3.1	1.8	1.9	2.2
Total General Fund Operating	269.5	231.8	276.0	281.1	300.0
General Fund Non-operating					
Property taxes	76.7	82.2	86.9	92.1	97.2
Interest and other	18.9	16.3	19.5	8.0	7.6
Total General Fund Non-operating	95.6	98.5	106.4	100.1	104.8
General Fund Total	365.1	330.3	382.4	381.2	404.8
Other Funds and Accounts					
CAGRD	45.9	44.5	65.4	55.4	62.6
Supplemental Water	0.3	0.3	-	0.1	0.1
Captive Insurance	9.6	10.5	11.0	11.7	12.7
Eliminations	(21.6)	(20.7)	(43.7)	(28.2)	(29.7)
Total Revenue	\$ 399.3	\$ 364.9	\$ 415.1	\$ 420.2	\$ 450.5

All Funds by Revenue Type (\$ Millions)

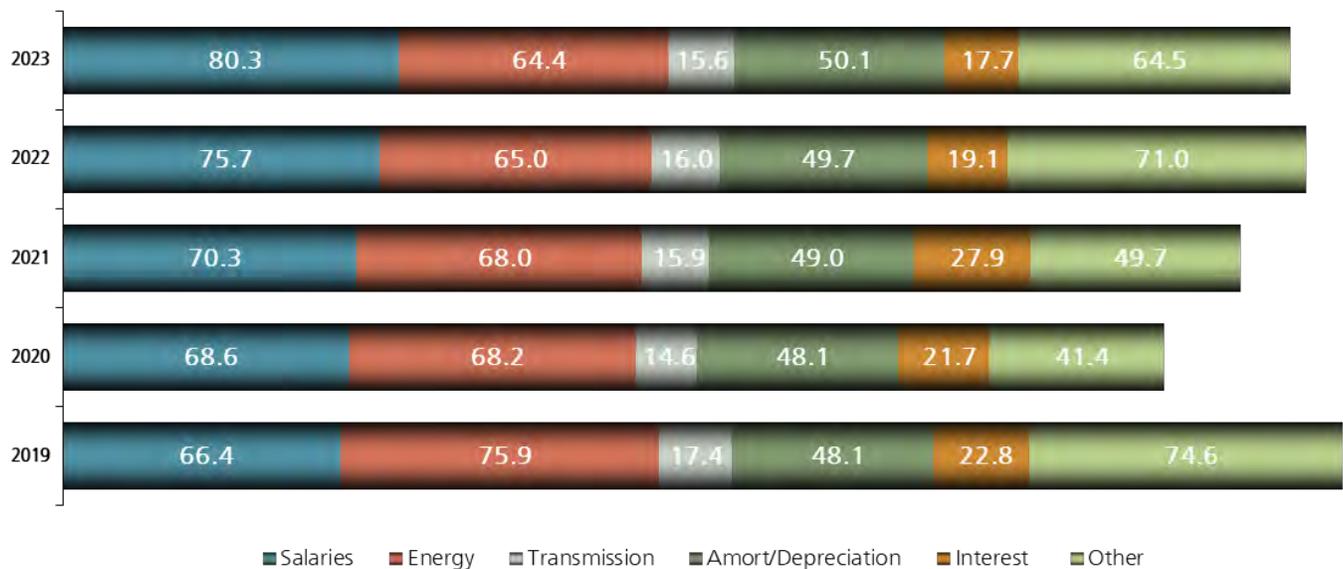


TOTAL EXPENSES

(Millions)

	2019	2020	2021	2022	2023
	Actual	Actual	Projection	Budget	Budget
General Fund Operating					
Salaries and related costs	\$ 65.3	\$ 67.6	\$ 69.2	\$ 74.3	\$ 78.8
Pumping energy	75.9	68.2	68.0	65.0	64.4
Transmission	17.4	14.6	15.9	16.0	15.6
Amortization and depreciation	48.1	48.0	48.9	49.6	50.1
Other expenses	69.0	31.0	36.5	64.7	64.4
Total General Fund Operating	275.7	229.4	238.5	269.6	273.3
General Fund Non-operating					
Interest and other	27.0	27.6	37.8	26.4	18.1
Total General Fund Non-operating	27.0	27.6	37.8	26.4	18.1
General Fund Total	302.7	257.0	276.3	296.0	291.4
Other Funds and Accounts					
CAGR	16.0	17.7	38.4	17.7	19.2
Supplemental Water	-	-	-	-	-
Captive Insurance	8.1	8.6	9.8	11.0	11.7
Eliminations	(21.6)	(20.7)	(43.7)	(28.2)	(29.7)
Total Expenses	\$ 305.2	\$ 262.6	\$ 280.8	\$ 296.5	\$ 292.6

All Funds by Expense Type (\$ Millions)

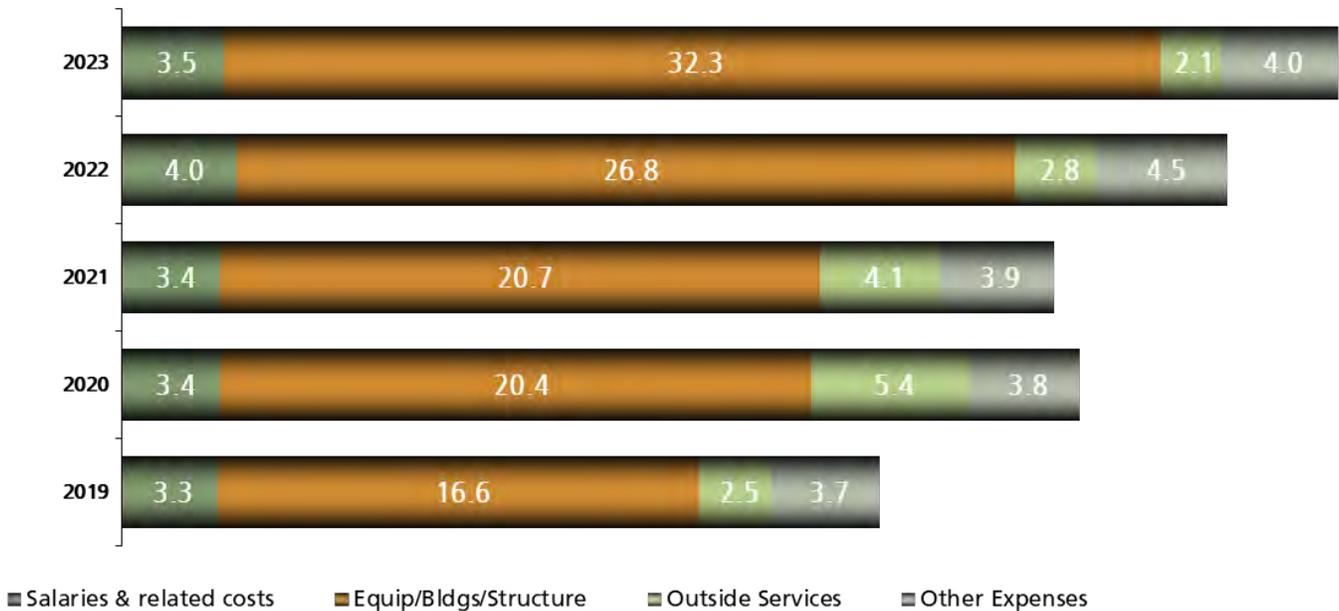


CAPITAL SPENDING

(Millions)

	2019	2020	2021	2022	2023
	Actual	Actual	Projection	Budget	Budget
Salaries and related costs	\$ 3.3	\$ 3.4	\$ 3.4	\$ 4.0	\$ 3.5
Equipment, buildings, and structures	16.6	20.4	20.7	26.8	32.3
Outside services	2.5	5.4	4.1	2.8	2.1
Materials, supplies & other expenses	0.4	0.3	0.4	0.2	0.2
Capitalized interest	-	-	-	-	-
Overhead expenses	3.3	3.5	3.5	4.3	3.8
Total Capital	\$ 26.1	\$ 33.0	\$ 32.1	\$ 38.1	\$ 41.9

Capital Spending by Type (\$ Millions)





Colorado River—Havasupai Falls



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