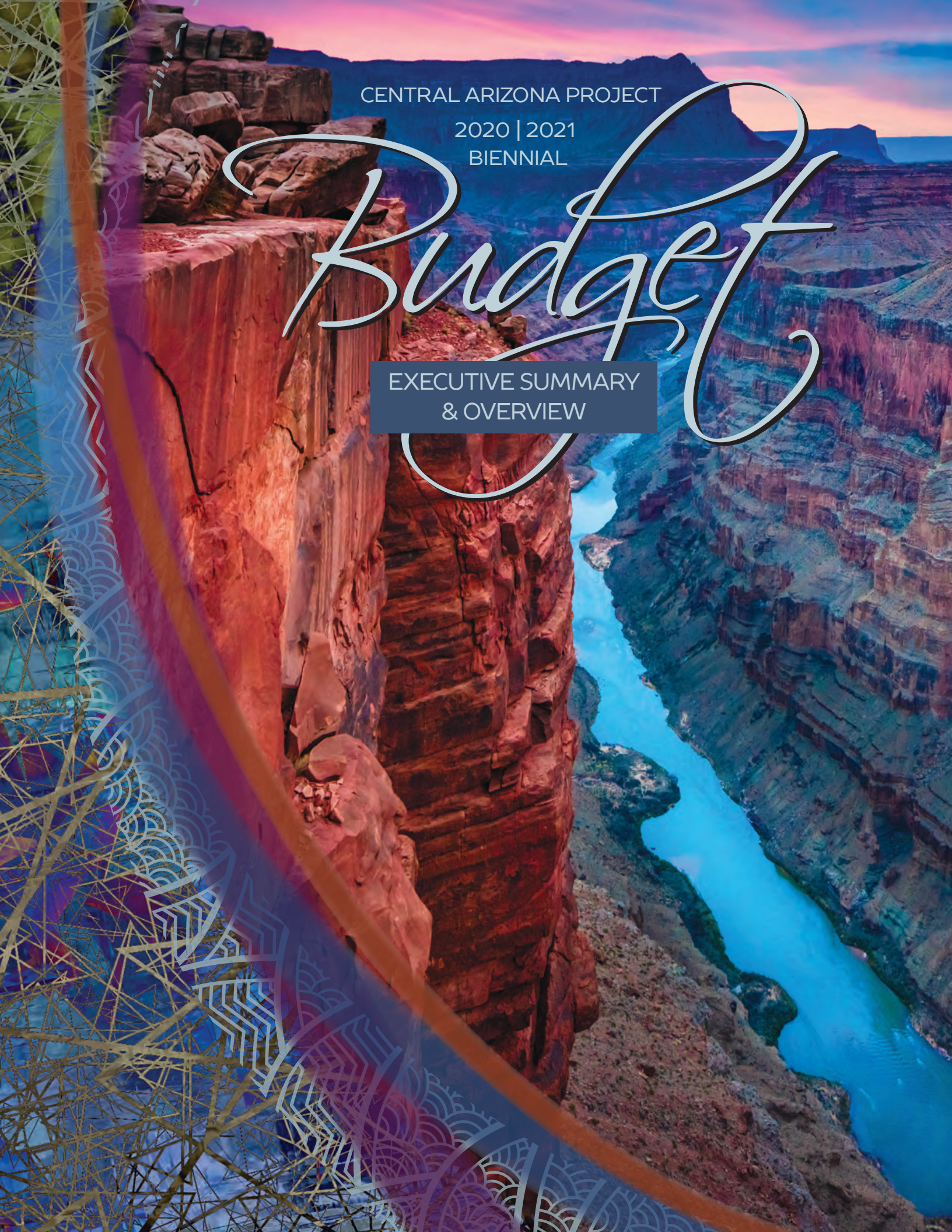

CENTRAL ARIZONA PROJECT

2020 | 2021
BIENNIAL

Budget

EXECUTIVE SUMMARY & OVERVIEW

Executive Summary
Table of Contents

The 2020 / 2021 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/2020-21-budget

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Special Recognition:

Fritz Communications — *Design*
Tina Brown — *Finance - Internal Design / Layout*
Vicky Campo / Travis Dins — *Communication Representatives*
Philip Fortnam — *Photography (CAP Locations)*

Colorado River - Havasupai Falls

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 2020 / 2021 Biennial Budget in one cohesive document.

The budget document includes the following sections and can be found in it's entirety on the CAP website :

https://www.cap-az.com/departments/finance/biennial-budgets/2020-21-budget

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.

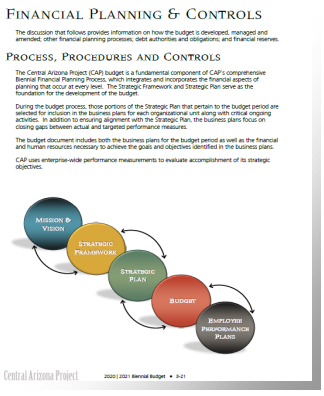
Planning & Authorities reviews the District's planning and control processes, including strategic planning, financial planning and capital planning. The section identifies the District's strategic framework, plan, and performance measures, as well as providing the District's debt authorities, obligations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

Operating Budget provides the budget information for the day-to-day operations of the District for the General Fund, CAGRD 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 discussion that follows provides information on how the budget is developed, managed and amended; other financial planning processes; debt authorities and obligations; and financial reserves.

PROCESS, PROCEDURES AND CONTROLS

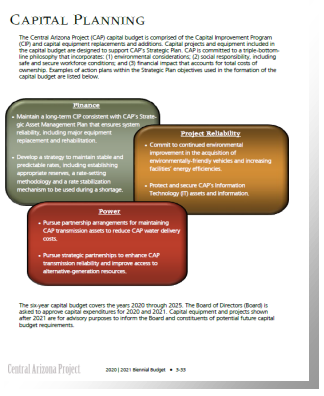
The Central Arizona Project (CAP) budget is a fundamental component of CAP's comprehensive Biennial Financial Planning Process, which integrates and incorporates the financial aspects of planning that occur at every level. The Strategic Framework and Strategic Plan serve as the foundation for the development of the budget.

During the budget process, those portions of the Strategic Plan that pertain to the budget period are selected for inclusion in the business plans for each organizational unit along with critical ongoing activities. In addition to ensuring alignment with the Strategic Plan, the business plans focus on closing gaps between actual and targeted performance measures.

The budget document includes both the business plans for the budget period as well as the financial and human resources necessary to achieve the goals and objectives identified in the business plans.

CAP uses enterprise-wide performance measurements to evaluate accomplishment of its strategic objectives.

Central Arizona Project 2020 | 2021 Biennial Budget • 3-21


CAPITAL PLANNING

The Central Arizona Project (CAP) capital budget is comprised of the Capital Improvement Program (CIP) and capital equipment replacements and additions. Capital projects and equipment included in the capital budget are designed to support CAP's Strategic Plan. CAP is committed to a triple-bottom-line philosophy that incorporates: (1) environmental considerations; (2) social responsibility, including safe and secure workforce conditions; and (3) financial impact that accounts for total costs of ownership. Examples of action plans within the Strategic Plan objectives used in the formation of the capital budget are listed below.

Finance
- Maintain a long-term CIP consistent with CAP's Strategic Asset Management Plan that ensures system reliability, including major equipment replacement and rehabilitation.
- Develop a strategy to maintain stable and predictable rates, including establishing appropriate reserves, a rate-setting methodology and a rate stabilization mechanism to be used during a shortage.

Project Reliability
- Commit to continued environmental improvement in the acquisition of environmentally-friendly vehicles and increasing facilities' energy efficiencies.
- Protect and secure CAP's Information Technology (IT) assets and information.

Power
- Pursue partnership arrangements for maintaining CAP transmission assets to reduce CAP water delivery costs.
- Pursue strategic partnerships to enhance CAP transmission reliability and improve access to alternative-generation resources.

The six-year capital budget covers the years 2020 through 2025. The Board of Directors (Board) is asked to approve capital expenditures for 2020 and 2021. Capital equipment and projects shown after 2021 are for advisory purposes to inform the Board and constituents of potential future capital budget requirements.

Central Arizona Project 2020 | 2021 Biennial Budget • 5-33


Table of Organization

Central Arizona Project 2020 | 2021 Biennial Budget • B-1

November 2019

To our Board, Customers and Constituents

The 2020 / 2021 Biennial Budget is the eighth 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 has worked well for us, and allows the Board and staff to concentrate primarily on the budget during the odd years, and address other financial planning matters, such as strategic planning, water rates, reserves and financing strategy in the even years. The work done during one part of the cycle complements the work done in the other part, with the decisions made and information created in one process becoming the inputs and assumptions for the processes in alternate years. 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.

Our Board last updated the CAP Strategic Plan in 2016. As with previous CAP budgets, the Strategic Plan is the basis for the 2020 / 2021 Biennial Budget. The plan identifies the strategic issues, objectives and associated action plans that are critical to carrying out our mission. These action plans are organized under six Key Result Areas (KRAs):

- Leadership & Public Trust
- Finance
- Project Reliability
- Water Supply
- Power
- Replenishment

During the upcoming year, the Board of Directors will undertake the development of a new CAP Strategic Plan. 2019 has been a year of paradigm shifts, including the closure of Navajo Generating Station (NGS), our long-time primary source of electricity to move CAP water; the adoption of the Colorado River Basin Drought Contingency Plan (DCP) that will improve the reliability of our Colorado River supply, but do so by requiring us to leave more of it in Lake Mead; the completion of a significant water credit purchase and long-term lease and exchange agreement for our Replenishment division; and a growing focus on the capacity to recover supplies stored underground for times of shortage and the introduction of non-CAP supplies into our system. With the world changing around us, it is incumbent on CAWCD to update its strategic focus on new goals that will carry us well into the future.

Water Supply continues to be the KRA at the forefront of everything we do. Since 100% of CAP's water supply comes from the Colorado River, there has been renewed emphasis on how the seven Colorado River Basin states, the U.S. Bureau of Reclamation (Bureau, Reclamation, or BOR) and the Republic of Mexico manage this critical resource. Despite a historically wet winter in 2019, the region remains in the grip of a twenty-year drought. While recent precipitation may alleviate the

need for reductions in 2020 (and possibly 2021), the long-term outlook still requires our constant vigilance. Adoption of the DCP buys us time to address the ongoing overallocation, or "structural deficit", in the Lower Basin, but there is still much work to be done to secure our long-term water future. Reconsultation on the 2007 Guidelines, which expires in 2026 along with the DCP, is required to begin no later than the end of 2020.

Power is another component of our Strategic Plan that will require an incredible amount of attention. For years, NGS has been a reliable and affordable source of power for the majority of CAP water deliveries. This coal-fired power plant was originally intended to operate until 2044; however declining natural gas prices and increasingly cost-effective renewable energy alternatives have made the continued operation of the plant economically unfeasible, forcing its closure in 2019. For the first time in its history, CAP will now be required to secure nearly all of its power on the open market, which simultaneously allows us to take advantage of lower energy costs but subjects the system to the potential for more price volatility. The Board has adopted a portfolio that includes traditional and renewable resources in response to the NGS closure. Additionally, CAP staff has already begun to lock in favorable pricing and availability in the future through the use of reverse energy auctions. CAP continues to expand and refine its energy procurement in this quickly-changing environment, but the early indications are that our customers will enjoy lower energy costs built into the water delivery rates for the foreseeable future.

The Replenishment KRA also achieved a significant milestone in 2019, when the Central Arizona Groundwater Replenishment District (CAGRD) entered into an agreement with the Gila River Indian Community (GRIC) and Gila River Water Storage LLC (GRWS) to secure a substantial wet water supply through 2044. This historic partnership between GRIC/GRWS and CAGRD provides 33,185 acre-feet per year of water (which is approximately equal to our annual replenishment obligation) for 25 years and another 70,375 Phoenix Active Management Area long-term storage credits. Work continues on identifying and acquiring additional supplies. 2020 will mark the "mid-plan review" of CAGRD's current 10-year plan, which is an opportunity to reevaluate the assumptions in the current plan and affirm its effectiveness.

The Finance KRA is interwoven with initiatives from each of the other KRAs; for example, the GRIC/GRWS deal has an initial cost of $95 million. While CAGRD was able to cover up to $75 million with existing reserves, the balance required a financing mechanism. Finance staff worked diligently to secure an outside loan at a favorable interest rate, which allows CAGRD to gain some experience in the credit market and retain flexibility to act if additional opportunities present themselves in the future.

The closure of NGS will also place additional fiscal challenges on CAP stakeholders. Previously, excess energy sold by NGS could be utilized to offset a portion of the annual Repayment

obligation to the federal government for the construction costs of the CAP system. With the elimination of this revenue source, the obligation of Repayment can only fall to two remaining sources: Capital Charges to M&I Customers and Property Taxes. Balancing the desires of various stakeholder groups will continue to be a challenge we wrestle with in the post-NGS world. We will continue to maintain flexible rate-setting policies and put rate stabilization resources into place to offset not only the loss of NGS, but also the potential impact of shortages in the future.

There is one potential fiscal challenge on the horizon that it is too important to pass over. We continue to be concerned by the delay in the reallocation of a portion of the Non-Indian agriculture (NIA) pool water, which when approved, will immediately generate $50 million in additional revenue from back capital charges on the reallocated water. Should reallocation not be approved by the Bureau of Reclamation in 2021 as currently expected, CAWCD will not have the planned revenues to pay for the 9(d) Debt that CAP assumed on behalf of irrigation districts under the Arizona Water Settlement Act.

Project Reliability is all about maintaining reliable deliveries and minimizing unplanned outages. In the upcoming budget cycle, we will begin to explore data integration options that will improve our predictive abilities in maintaining the system and help us continue to move away from reactive repairs. We continue to be engaged in a series of system-wide replacements of infrastructure components which, in many cases, are "original equipment" and on the order of 30+ years old. These include everything from valves, motor and pump components, communications equipment and protective relays to fire protection, underground siphon coatings and more. Additionally, we will need to continue to invest substantial resources into ensuring we have a world-class staff to keep the water flowing, even as demographics in the workforce and the labor market in which we participate are changing. Our award-winning Apprenticeship Program continues to produce highly-qualified craftsmen. We will also be entering into our sixth year of the Supervisor Academy, a comprehensive training program for new supervisors, as well as the second cohort of our Manager University. In 2020, we will seek recertification as a Voluntary Protection Program (VPP) STAR workplace, as safety continues to be one of our core initiatives.

In recent years, the existence of CAP has generated an economic benefit approaching **$100 BILLION PER YEAR,** accounting for at least one-third, and sometimes more, of the entire Arizona gross state product.

Approximately 1/3 of Arizona's Gross State Product ($100 million annually) can be attributed to the economic benefit provided by the delivery of CAP water, according to study by Arizona State University. Over 80% of the state's population lives within our service area. The Colorado River water that we deliver supplies one of the great agribusiness hubs in America. With this kind of reach, it is critical that we demonstrate Leadership and Public Trust in everything we do. In making important decisions, we value our stakeholders' feedback, and as a result, we have made it easier than ever for them to become engaged.

Through the work of a Customer Service Task Force established by the Board, we have identified opportunities to improve customer service processes and stakeholder involvement. Examples include quarterly Roundtables to discuss topics of importance to CAP customers, routine publication of a 45-day "look ahead" on matters that will be coming before the CAWCD Board, "Electronic Blue Cards" which allow stakeholders to provide public comment even if they cannot physically attend our public meetings and customer service feedback cards. These recent improvements complement earlier changes made, such as live-streaming our Board meetings. By improving the avenues by which we communicate, it our intent to be as transparent and focused in our messaging to stakeholders as possible.

Our strategies and action plans are described in greater detail in the following pages, along with the accomplishments we have already seen to date. We believe this document will not only communicate our fiscal and operational health to you, but it will also serve as our financial plan, our policy guide and a key part of our strategy for moving into the future.

We take pride in this publication and we are pleased to share this latest edition with all of you. Our ability to excel depends on the continued support and guidance of our Board and on the feedback we receive from our customers, constituents and employees. We believe we have developed a strong, reliable plan that will serve our community well in the near term and position us for success as we venture into a post-NGS, post-DCP world.

Theodore C. Cooke
General Manager

The CAWCD Board of Directors

Lisa A. Atkins
President

Terry Goddard
Vice President

Sharon B. Megdal, Ph.D.
Secretary

Maricopa County

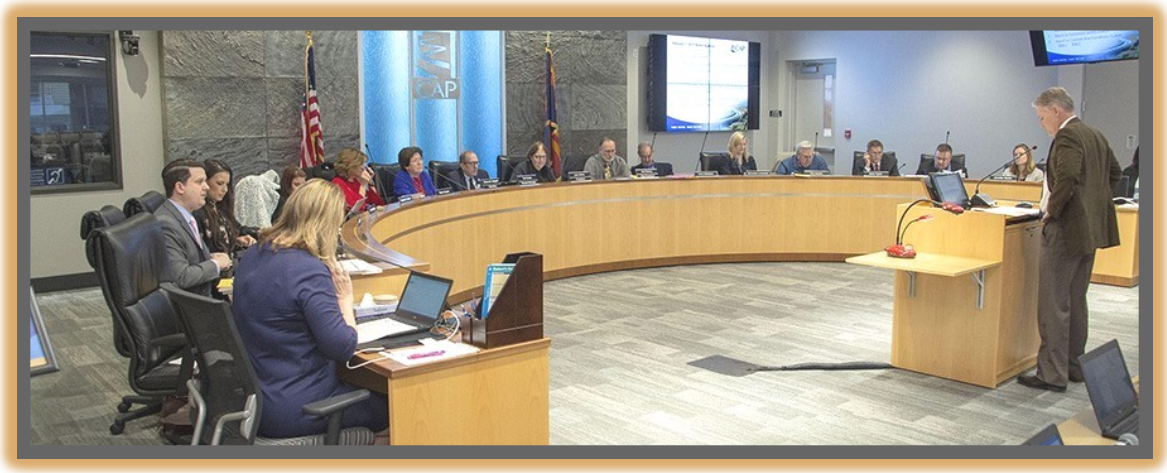
A.	Alexandra Arboleda	Term Ending 2022
B.	Lisa A. Atkins	Term ending 2024
C.	Jennifer Brown	Term ending 2022
D.	Terry Goddard	Term ending 2024
E.	Benjamin W. Graff	Term ending 2022
F.	Jim Holway	Term ending 2022
G.	Mark Lewis	Term ending 2022
H.	Heather Macre	Term ending 2024
I.	Jennifer Martin	Term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

Pima County

K.	Karen Cesare	Term ending 2020
L.	L.M. "Pat" Jacobs IV	Term ending 2020
M.	Sharon B. Megdal, Ph.D.	Term ending 2020
N.	Mark Taylor	Term ending 2020

Pinal County

O.	Jim Hartdegen	Term ending 2020



CAWCD Governance

CAWCD is 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 and 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.

CAGRD and Underground Storage Committee

The Central Arizona Groundwater Replenishment District (CAGRD) and 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 CAGRD'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.

Previous Task Forces have included:

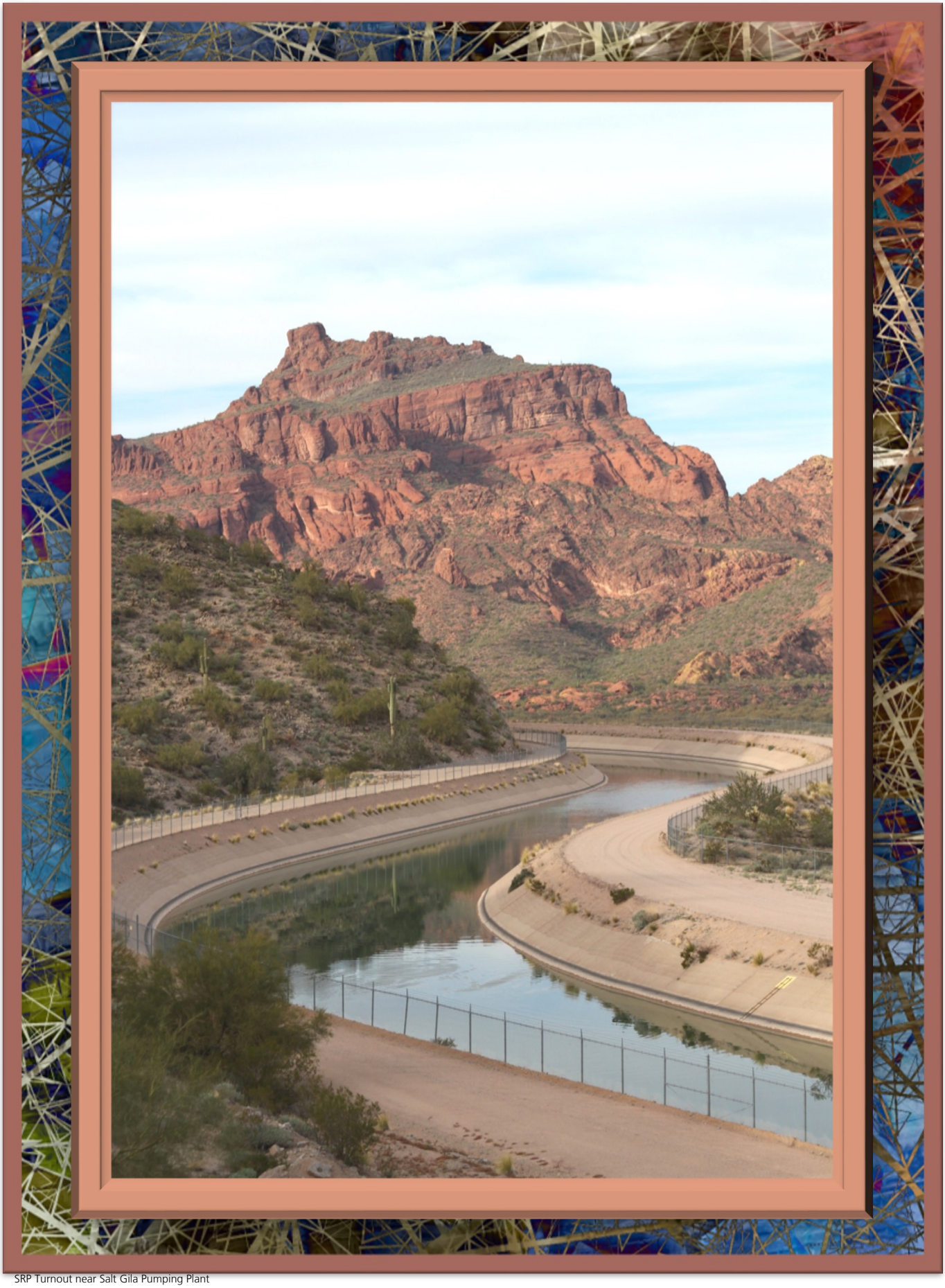
- Communications Task Force
- Power Task Force
- Excess Water Task Force
- Water Quality Task Force
- Customer Service Task Force

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, 2018. 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 is the steward of central Arizona's Colorado River water entitlement and a collaborative leader in Arizona's water community.

Our Vision

Central Arizona Project will be a collaborative, innovative leader in the management and the delivery of water to central Arizona. It will enhance the state's economy and quality of life and ensure sustainable growth for current and future populations of Arizonans.

Our Values

Reliability: We will plan for every drop of Colorado River water available to us

Leadership: We will be a leader in local and regional water issues

Our Employees: Our employees are our most important resource

The Public Trust: We respect the trust we have earned from our constituents

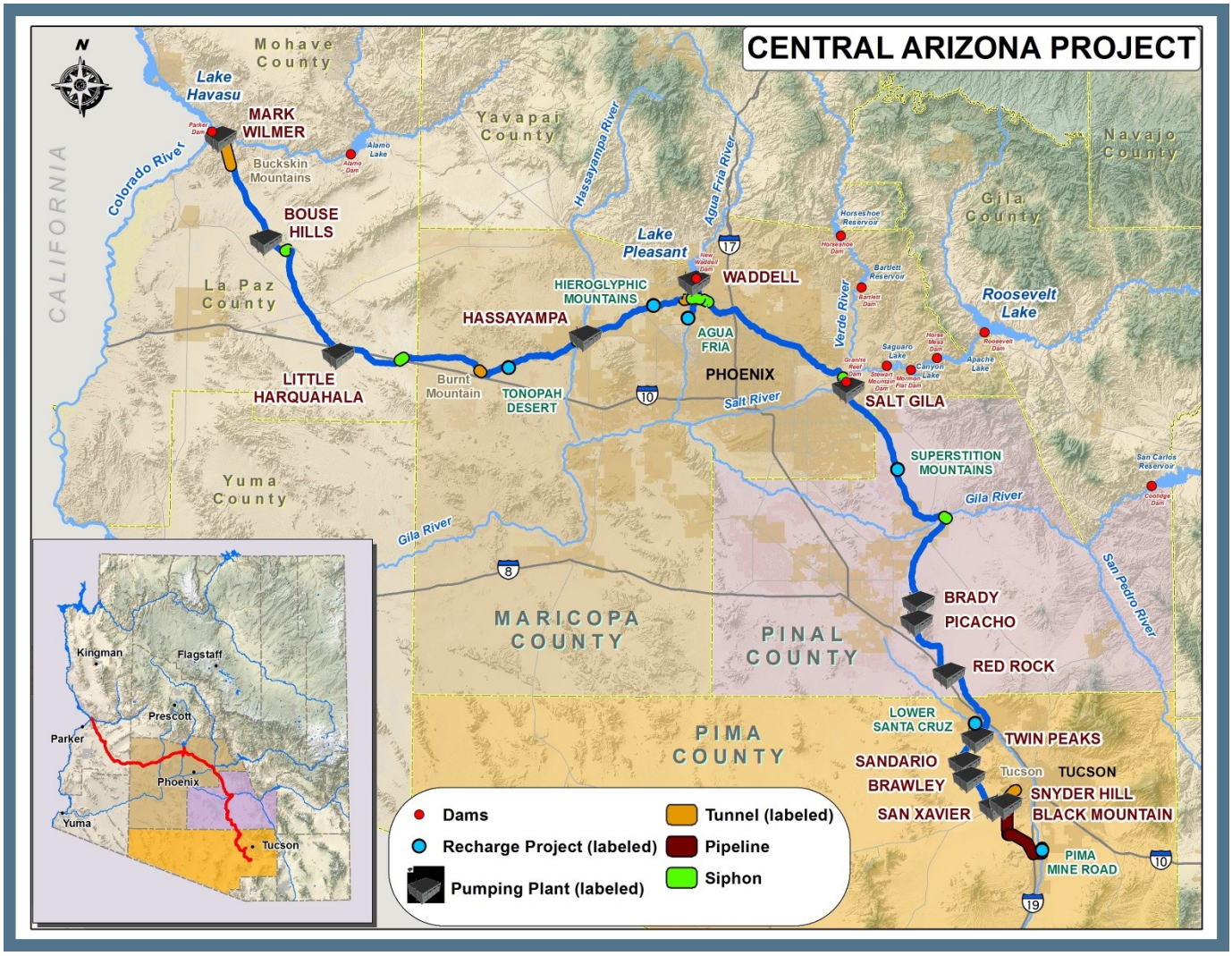
The Environment: We will operate in an environmentally responsible manner

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.

Check Structure 23 in Scottsdale

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 often projects 50 to 100 years into the future in preparation for meeting 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.

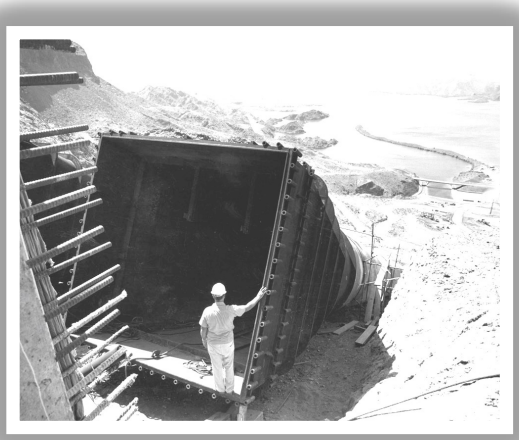
Second, CAWCD delivers Arizona's share of Colorado River water through a conveyance system that it also operates and maintains. The CAP aqueduct begins at the Arizona-California border near the confluence of the Bill Williams and Colorado Rivers at Lake Havasu and extends east and then south past Tucson 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 CAGRD, and to build, operate and maintain underground storage projects as well as being a recovery agent of stored water.

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

Lyndon B. Johnson signing CAP Construction bill



Early Construction at Mark Wilmer Pumping Plant in Havasu

Early Construction at Mark Wilmer Pumping Plant in Havasu

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.

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 5.5 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 has decreased to about 1.4 million acre-feet in recent years.

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.

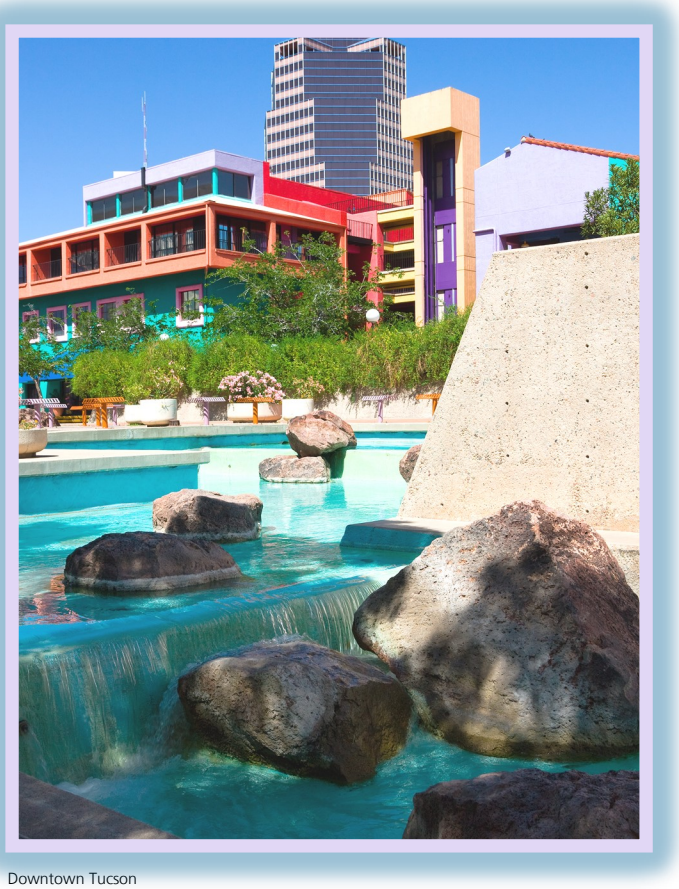
	Maricopa	Pima	Pinal	Arizona
2000 Population	3,072,149	843,746	179,727	5,130,632
2010 Population	3,824,058	981,168	376,369	6,401,569
2017 Population	4,221,684	1,026,099	427,603	6,965,897
2055 Projected Population	6,414,083	1,277,075	1,181,033	10,504,530
Percent change projected between 2017 and 2055	51.93%	24.46%	176.2%	50.8%
2017 Labor Force *(non-farm)*	2,134,987	475,622	168,806	3,312,720
2017 Land Area *(square miles)*	9,222	9,184	5,374	113,635
2017 Unemployment Rate	4.2%	4.5%	5.0%	4.9%

Based on latest information available from the 2018 Arizona Commerce Authority (https://www.azcommerce.com/locate/county-profiles/ - Last Updated 10/01/2018) and 2055 data based on information from Office of Economic Opportunity (https://population.az.gov/population-projections).

CAP reserves and makes available a volume of excess water (currently 225,000 acre-feet) for specific agricultural customers. 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 water will decline over time, and is available to CAP's agricultural customers through 2030. Ag Settlement Pool use currently represents about 20% of CAP deliveries.

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 > Departments >Water Operations > Allocations



Downtown Tucson

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.

CAP conducts regular tours and informational meetings to reach out to its M&I customer base, and CAP staff members periodically tour customer facilities to learn more about their operations and water management. In addition, CAP sends out a monthly newsletter to municipal partners.

More information visit: CAP-AZ.com > Departments > Water Operations > 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 supply is designated to 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 > Tribal Water

Central Arizona Groundwater Replenishment District

CAGRD has a statutory obligation to replenish groundwater used by members in CAP's three-county service area. Created in 1993, CAGRD must replenish groundwater withdrawals made by new developments enrolled in the CAGRD, and water providers and homeowners agree to pay the cost to replenish any amount of groundwater pumped beyond limitations set by the state. CAGRD currently replenishes groundwater on behalf of 24 member service areas (MSA) and 1,160 member land (ML) subdivisions representing approximately 284,000 homes.

More information visit: CAGRD.com

Pima Mine Road Recharge Site

Arizona Housing Developments

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 CAGRD customers that have joined the CAGRD as a means to meet their assured water supply requirements.

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

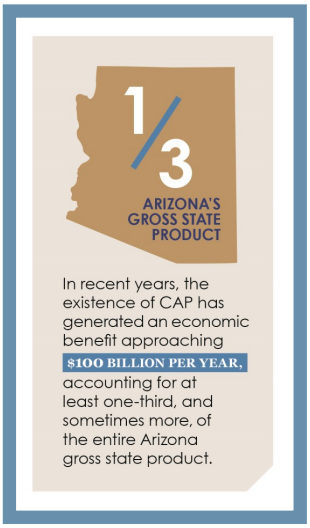
Proposition 117 took effect in tax year 2015, which established that a property's net assessed valuation (NAV) will be taxed based on the Limited Property Value (LPV). This proposition limits the annual growth in the LPV of all locally assessed property to 5%.

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
2015	$34,624	-1.3%	$2,058	0.8%	$7,620	0.5%	$44,302	-0.9%
2016	$36,135	4.4%	$2,120	3.0%	$7,817	2.6%	$46,072	4.0%
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	$45,701	5.8%	$2,696	6.9%	$9,229	5.7%	$57,626	5.8%
2021	$48,269	5.6%	$2,875	6.7%	$9,701	5.1%	$60,846	5.6%
2022	$50,959	5.6%	$3,060	6.4%	$10,107	4.2%	$64,126	5.4%
2023	$53,815	5.6%	$3,243	6.0%	$10,389	2.8%	$67,447	5.2%

Sources: CAP; Maricopa County; Pinal County; Pima County; Elliott D. Pollack & Company (March 2019)

Economic Impact of CAP to Arizona

CAP's delivery of Colorado River water from 1986 through 2010 has generated in excess of $1 trillion ($1,090,000,000,000) of Arizona's gross state product (GSP), according to a study commissioned in 2014 by CAP with the W.P. Carey School of Business at Arizona State University (ASU). The GSP represents the dollar values of all goods and services produced in the region and are a measurement of the economic output of a state, a counterpart to the gross domestic product (GDP) for the nation. In recent years, the existence of CAP has generated an economic benefit approaching $100 billion per year, accounting for a minimum one-third, and sometimes more, of the entire Arizona GSP.

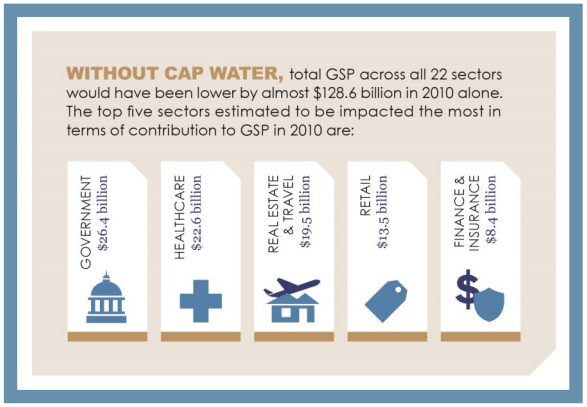


To answer the question, "What if CAP was never built and no CAP water was delivered?", researchers at the L. William Seidman Research Institute of W.P. Carey School of Business at ASU conducted the analysis to estimate the economic value of CAP during:

- Construction period (1973-1993)
- Water delivery period (1986-2010)

Key Findings:

- CAP water deliveries (1986-2010) have accounted for over $1 trillion of Arizona's GSP, approximately 23% of the GSP during this 25-year period.
- In the most recent five years of the study, CAP generated an economic benefit averaging over $90 billion per year, an average of 35% of Arizona's GSP each year.
- In the latest year of the study (2010), CAP generated $128 billion of the GSP, 49.5% of the total for the state of Arizona and more than 1.6 million job-years of employment.
- In 2010 alone, total GSP across all 22 sectors would have been lower by almost $128.6 billion if not for the delivery of CAP water. The top five sectors estimated to have declined the most in terms of contribution to the GSP in 2010 are: Government ($26.4 billion), Healthcare ($22.6 billion), Real Estate & Travel ($19.5 billion), Retail ($13.5 billion) and Finance & Insurance ($8.4 billion).



- During the construction period (1973-1993), CAP generated approximately $2.4 billion of the state's GSP and annual employment of up to 9,400 job years. This dollar value is approximately equivalent to the cost of the reimbursable portion of the CAP construction cost, including interest.

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 is currently diverting about 1.6 million acre-feet of Colorado River water annually, and delivers more than 1.4 million acre-feet of CAP water to customers in central and southern Arizona. The Colorado River is the lifeblood of the CAP system.

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 and 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 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.

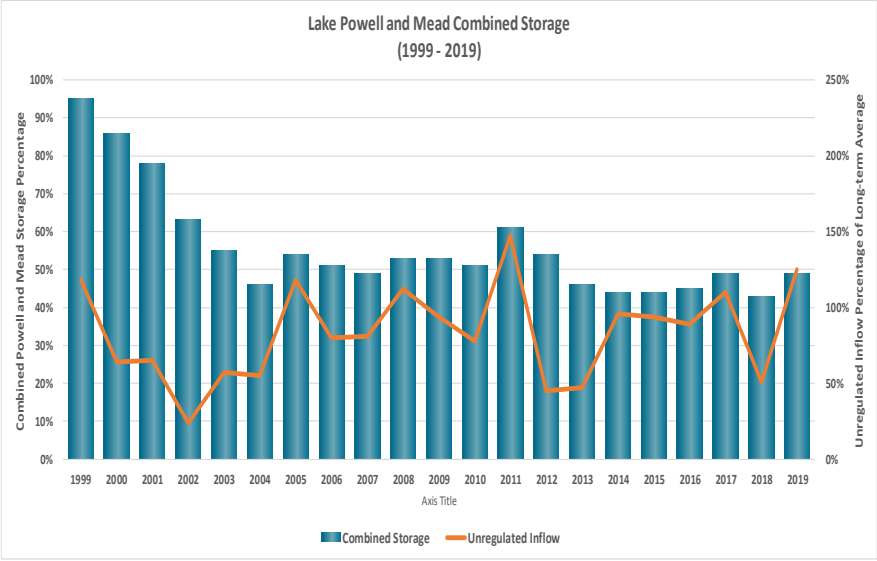
The Colorado River is composed of three major river systems: Green River, Colorado River and the San Juan River. The Colorado River is the lifeblood of the southwestern United States and Northwest Mexico. The annual natural flow from the Colorado River is estimated to be about 14.8

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.

CAWCD is the largest user 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. Arizona's allocation is second only to California's 4.4 million acre-foot allocation. Mexico receives 1.5 million acre-feet of Colorado River water, and Nevada has a right to 300,000 acre-feet of water. Wyoming, Colorado, Utah and New Mexico each have 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.

View from Hoover Dam—Lake Mead

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 50,000,000 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 a 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 the risk of 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 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.

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. If the elevation predicted by the August 24-Month Study for January 1st of the following year falls

below an elevation of 1090' based on the updated DCP guidelines, a reduction is declared for the following year (e.g., a Tier Zero was declared for 2020 when the August 2019 prediction showed the end of December 2019 level to be below 1090'). A Tier 1 or lower shortage has not been declared on the Colorado River, but it is perilously close to occurring.

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 would, 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, deliver water available for agricultural users in central Arizona and may cause 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.

Prior to 2020, Central Arizona Project had been partnering with our stakeholders and the state to voluntarily reduce deliveries by approximately 200,000 acre-feet to leave water in Lake Mead to prevent or delay a shortage declaration. With the newly implemented DCP Guidelines, it is now required to be reduced by 192,000 acre-feet in a Tier Zero shortage.

Should levels in Lake Mead continue to fall even after a shortage has been declared, additional cutbacks to CAP, Nevada and Mexico will occur at elevations 1075', 1050' and 1025'. Arizona Department of Water Resources (ADWR) and CAP are working cooperatively with many other Colorado River users to stop or delay these additional cutbacks by protecting levels in Lake Mead.

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 recover and deliver these supplies should the need arise.

View from Hoover Dam—Lake Mead

Lake Mead

Protect Lake Mead

Drought. Over-allocation. Structural deficit. Declining water levels in Lake Mead. These are some of the many complex water challenges facing the southwest, so CAP has been collaborating with the federal government, partner states and Mexico to address these issues; because it is critical that all Colorado River water users, regardless of state, priority, or use sector, work quickly and diligently to protect the river and the communities that rely on its water.

Part of that effort is "Protect Lake Mead," an awareness campaign that is designed to educate the public about these important issues and encourage people to sign up for Lake Mead alerts. This is CAP's way to inform the public about the status of our water supply.

The public service announcements and social media messages contain important information about these issues, including the Five Reasons to Protect Lake Mead:

#1	The Colorado River is suffering an extended drought and over-allocation
#2	Lake Mead water levels are steadily falling
#3	If the lake level continues to fall there will be a shortage
#4	CAP's water supply is cut and costs go up during a shortage
#5	Leaving water in Lake Mead averts a shortage for 2017 through 2019

To date, CAP's collaborative efforts have been successful in avoiding a shortage through 2019, and CAP is committed to continuing those conservation programs that are protecting the levels of Lake Mead and keeping the system out of Tier 1 shortage. In addition, CAP, in partnership with the Arizona Department of Water Resources, is working to develop new programs in cooperation with Reclamation, California, Nevada and Mexico. Together, water leaders are addressing the long-term risks to the Colorado River and improving the health of the entire system, united in the commitment to ensure an adequate water supply for the communities that depend on the critical water supply.

One thing is clear: Continuing "business as usual" in the Lower Basin poses an unacceptable risk to all Colorado River water and energy users. Help "Protect Lake Mead" by learning more about Arizona's water issues, and supporting local and regional water utilities and elected officials in the difficult and potentially unpopular decisions that may have to be made.

PROTECT LAKE MEAD

MSCP - "Field of Dreams"

A 2019 article from CAP's Internal Communications - - CAP Connections

If you build it, they will come…..including a garter snake not seen in the U.S. in more than a century.

This "Field of Dreams" is known as the Lower Colorado River Multi-Species Conservation Program (MSCP), covering about 1,119 square miles in Arizona, California and Nevada. Started in 2005, this 50 -year program is beginning to reap some true benefits thanks to new and augmented habitats in the Lower Colorado River Basin aimed at protecting 27 species covered by the program, including eight listed under the Endangered Species Act.

"Truthfully, it's one of the coolest things we get to do" says Chuck Cullom, partnership with the U.S. Bureau of Reclamation, and water users in Arizona, California, and Nevada, is creating opportunities for these species to persist and survive."

The MSCP goal is to balance the Lower Basin use of Colorado River water resources with conservation of native species and their habitat. This includes:

- Planting 8,132 acres of Cottonwood Willows and Honey Mesquites, along with marsh and backwaters within the historic 100-year floodplain of the Lower Colorado River.
- Stocking 1.2 million fish—Razorback Suckers and Bonytail Chub

Nearly 15 years into the program, 6,049 acres of conservation habitat have been created and 320,000 Razorback Suckers and 100,000 Bonytail Chubs have been introduced into the system. The program operates through funding provided by the United States and from water and hydropower users in California, Arizona, and Nevada. The annual budget is about $36 million, of which Arizona, primarily from Central Arizona Project, provides about $4.5 million or 12.5% of the budget.

Most importantly, the program is working.

Earlier this year, the Northern Mexican Garter Snake, not seen in the U.S. since 1904, reappeared in the MSCP habitat. The Yellow-Billed Cuckoo, a classic "snowbird" (migrates from central and south America to the Lower Colorado River region) has been spotted spending winters nesting in the area. And, the MSCP is gearing up for more success stories when Planet Ranch, near Lake Havasu City's Bill Williams National Wildlife Refuge, is completed next year.

MSCP efforts not only create a more diverse ecosystem, they also have practical applications in terms of flood protection and reduced turbidity (murkiness) in the water that ultimately flows through CAP's pumping plants. By protecting our watersheds, we're also protecting our infrastructure.

And that's truly a win-win for everyone in this "Field-of-Dreams" - birds, reptiles and fish included!

Colorado River Salinity Control Program

In 1975 – more than 40 years ago – 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.

Colorado River Drought Contingency Plan (DCP)

Arizona residents can now be assured that future water supplies are more reliable and secure. The economies supporting the state can continue to thrive based on this secure water supply.

What is the Drought Contingency Plan?

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.

How was Arizona's DCP Implementation Plan developed?

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.

Why did Arizona participate in DCP?

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.

Will DCP prevent a shortage?

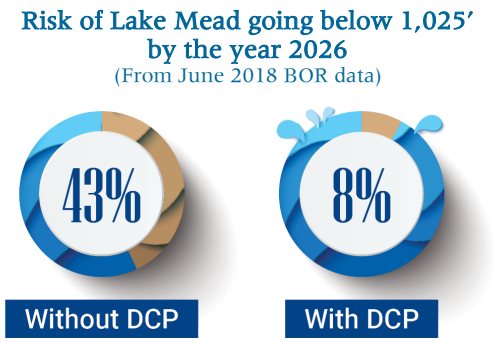
DCP will not prevent a Colorado River shortage, but due to Arizona's innovative water management programs, conservation and collaborative long-term planning, Arizona will continue to enjoy reliable water supplies. With DCP and Arizona's water management framework, we are prepared to handle the effects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

When does DCP start?

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

Why was DCP necessary?

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.



Projections by the U.S. Bureau of Reclamation in June 2018 showed that DCP would reduce the risks of Lake Mead falling below critical elevations. DCP provides Arizona with greater certainty for reliable and secure water supplies now and in the future.

You should know….

#1	A Colorado River water shortage does not mean that Arizona is in a water crisis.
#2	Arizona leads the nation with rigorous water conservation and sustainability laws that protect Arizona water users.
#3	The DCP provides a plan for how Arizona cities, agricultural users, industries, tribes and others will share Colorado River water supplies during shortages, while honoring the existing priority system.

Tier Zero….What is it?

Historic Drought Contingency Plan Signing Ceremony

Tier Zero is a new Lake Mead water shortage trigger at 1090' elevation. Since the lake currently sits between 1090' and 1075' (the Tier 1 trigger). Arizona will be in a Tier Zero shortage in 2020.

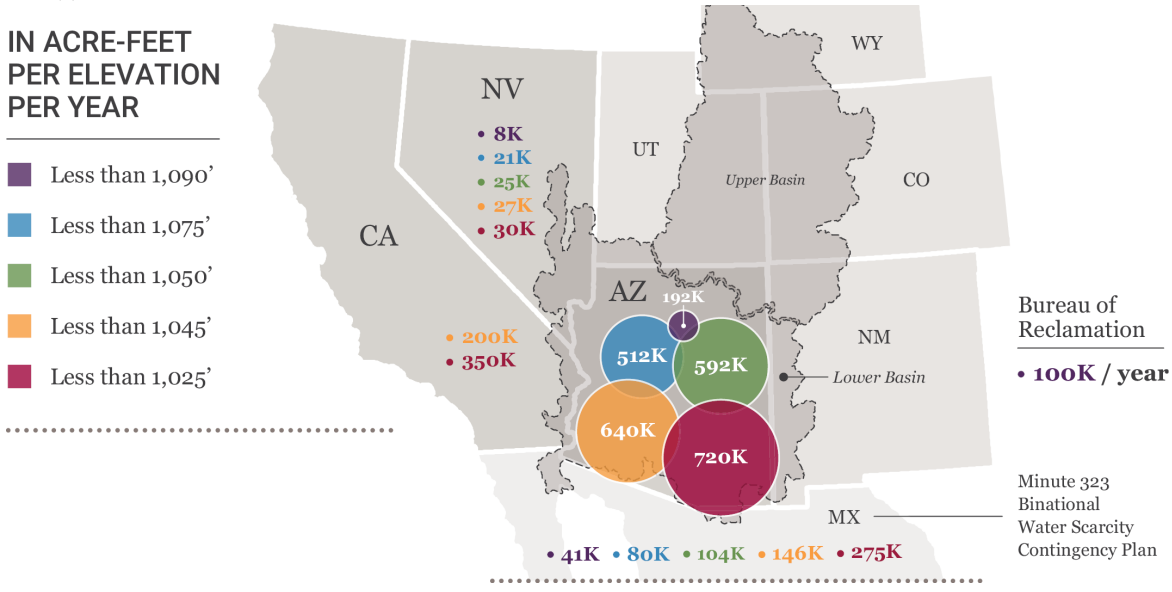
The small purple dot within the map below signifies the Tier Zero (less than 1090' elevation) realities. For Arizona, a Tier Zero shortage means our Colorado River supplies will be reduced by 192,000 acre-feet, falling almost entirely on CAP. In a Tier Zero shortage, supplies to Nevada and Mexico will also be reduced and the Bureau of Reclamation will begin making contributions to Lake Mead.

The 192,000 acre-feet reduction to CAP, about 12% of the normal CAP supply, is essentially equivalent to the amount we have been voluntarily leaving in the lake since 2015 as part of our Lake Mead Conservation program. The difference is that those contributions were voluntary, but under DCP these contributions become mandatory.

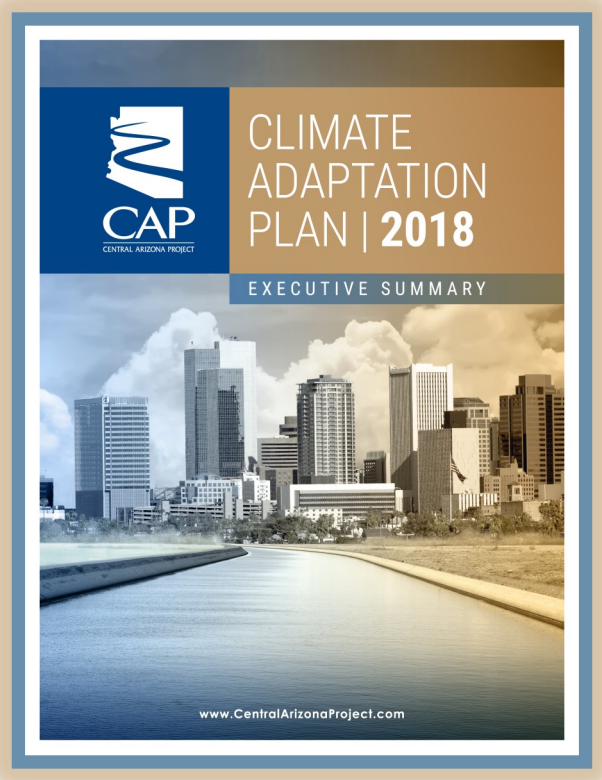
CAP's 2020 Water Plan and Base Rates use this Tier Zero shortage assumption. Tier Zero means there is no extra CAP water available for banking or replenishment. In addition, the CAP agricultural users will suffer up to one-third reduction in supply. These reductions are painful and increase CAP water rates. However, even with these reductions, CAP and our partners will continue to conserve resources to prepare for a drier future.

All-in-all, the likelihood that we lwon't enter a Tier 1 shortage until 2022, at the earliest, is encouraging news. We know, one great winter does not erase nearly two decades of drought. Working under the new realities of DCP, we now have a road map for the next several years. We'll be working under DCP until 2026, and in the interim we will continue to negotiate new shortage-sharing guidelines that will take effect in the subsequent period.

Lower Basin DCP Contributions to Lake Mead



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 will assume 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.

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, and 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.

Agua Fria Tunnel Outlet

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 2020 / 2021 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 expenditures 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
- 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.
- Due to its uncertainty, non-Indian Agriculture reallocation implications are not included in the budget

CAGRD Account

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

Assumptions

- CAGRD 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

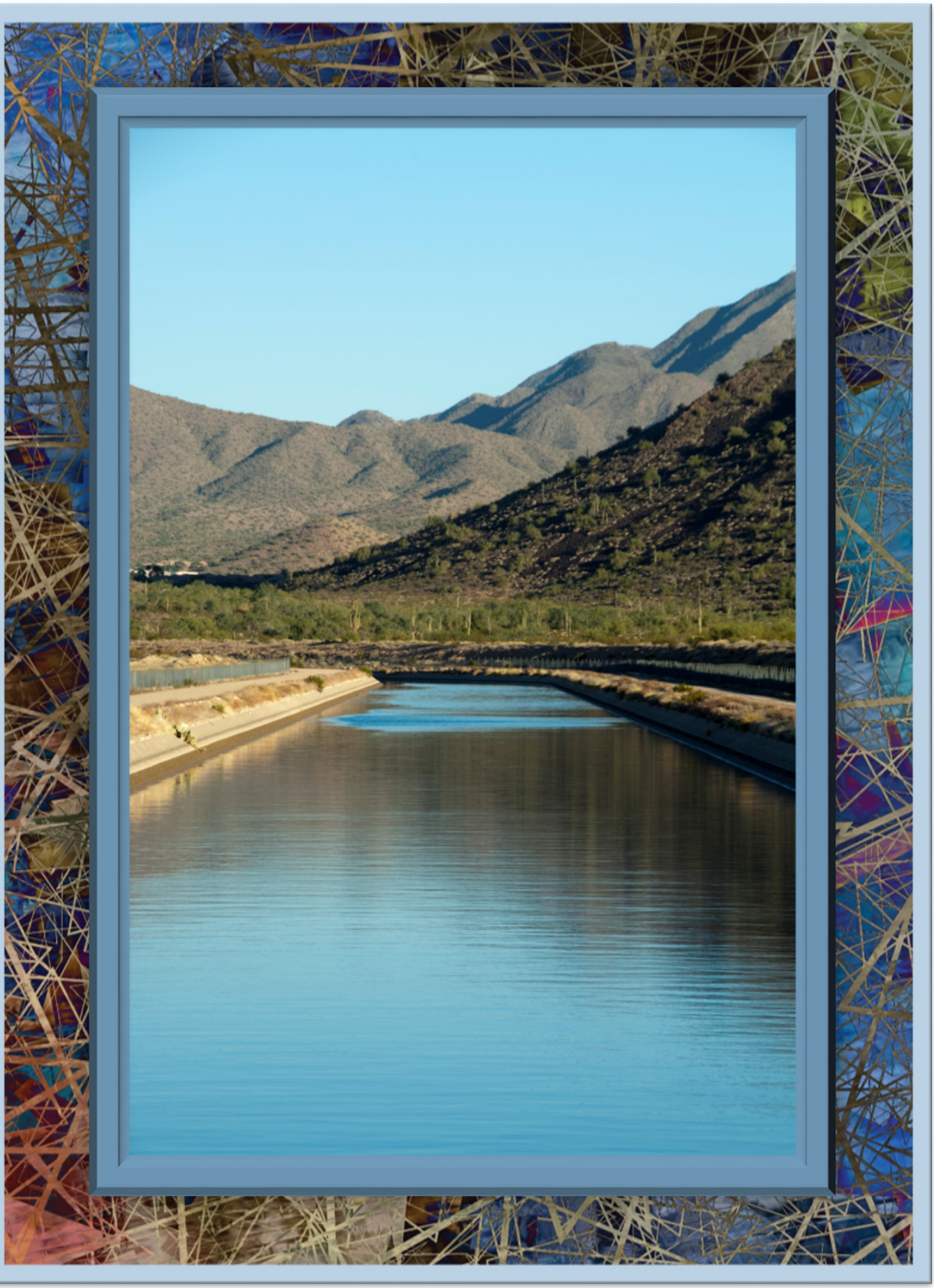
- Interest accrues on balance and there are no anticipated expenditures for the account during the budget period

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



CAP Canal near check structure 24

District Revenues

CAWCD has four major sources of funding:

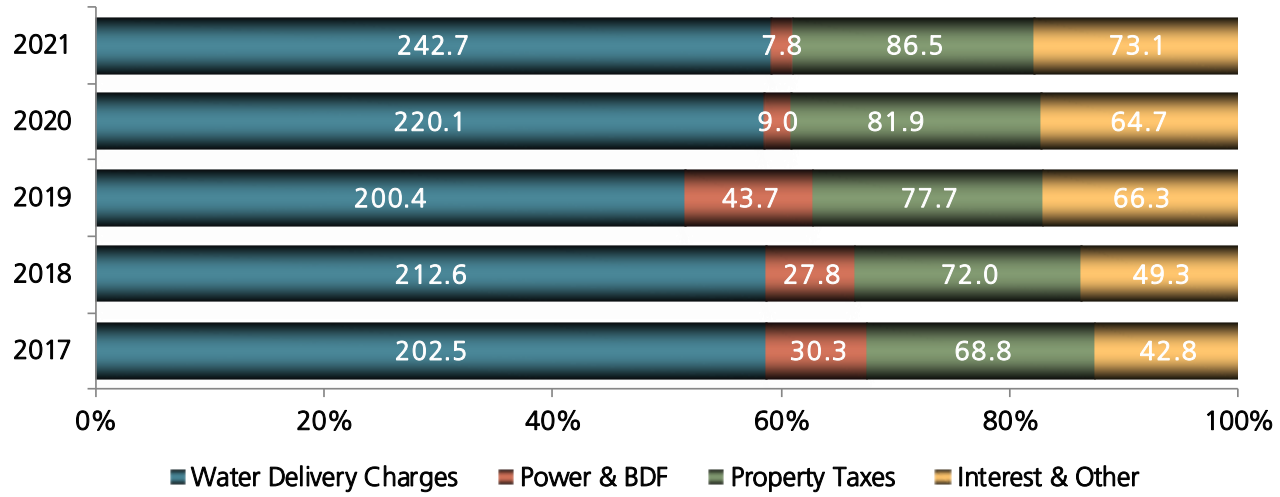
- Water delivery charges, which include Water Operations and Maintenance (O&M) charges, capital charges and pumping energy charges
- Power and Basin Development Fund (BDF) revenues
- Property taxes
- Interest income, reimbursement revenues, CAGRD revenues, underground water storage revenues and other miscellaneous revenues

Water delivery charges are the District's most significant revenue source, accounting for approximately 60% of the 2020 / 2021 Budget. Property taxes comprise approximately 21% of revenues, Power and Basin Development Fund revenues represent over 2%, with the balance comprised of Central Arizona Groundwater Replenishment District (CAGRD) charges, interest income, underground water storage fees, reimbursements and other revenues.

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, CAGRD 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 CAGRD 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)	2019 Projection	2020 Budget	2021 Budget	20 vs 19 Incr/(Decr)	21 vs 20 Incr/(Decr)
Water O&M Charges	$ 175.1	$ 184.8	$ 201.1	$ 9.7	$ 16.3
Capital Charges	25.3	35.3	41.6	10.0	6.3
Power & Other BDF	43.7	9.0	7.8	(34.7)	(1.2)
Property Taxes	77.7	81.9	86.5	4.2	4.6
Interest Income	19.9	11.9	12.4	(8.0)	0.5
Other Revenues	46.4	52.8	60.7	6.4	7.9
Total Revenues	$ 388.1	$ 375.7	$ 410.1	$ (12.4)	$ 34.4

Water Delivery Volumes and Water Delivery Charges

Water Delivery 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 400,000 acre-feet through 2016, but declined to 300,000 acre-feet in 2017. It remains at this level through 2023, then decreases to 225,000 acre-feet through 2030. 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 CAGRD 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 CAGRD 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 CAGRD annual replenishment obligations.
- All remaining Excess Water goes to the Statutory Firming Pool.

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

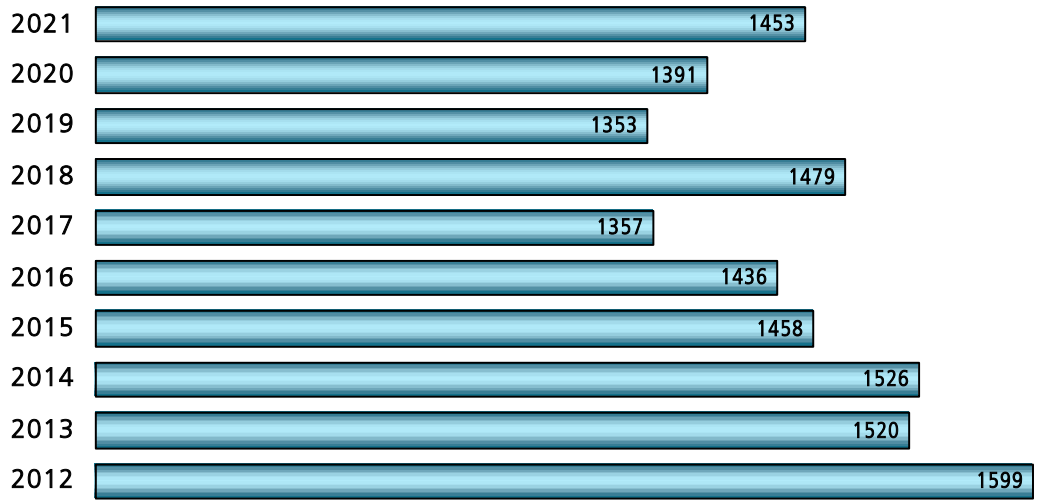
Due to the ongoing drought, structural deficit and Drought Contingency Plan (DCP) implementation, water available to CAWCD has decreased. In addition, as M&I and federal water usage has grown, the availability of excess water has decreased.

Major Assumptions

- The CAWCD planned deliveries are based on a Tier Zero DCP level, which includes a reduction of 192,000 acre-feet of deliveries in 2020 and 2021.
- The Gila River Indian Community (GRIC) is forbearing 83,000 acre-feet in 2020 to create Intentionally Created Surplus (ICS) credits, which will be held in Lake Mead until a future period. The Fixed OM&R rate is being paid on these credits so there is not an impact in 2020 on the Fixed OM&R rate (see explanation of the rate in the following pages).
- The Ag Settlement Pool of 300,000 acre-feet is reduced by voluntary reductions pursuant to a forbearance agreement to leave water in Lake Mead.
- No other excess water is made available during the budget period.

Water Deliveries 2012 to 2021

Acre-Feet (000)
Excludes credits



Water Delivery Charges

As prescribed in CAP's rate-setting policy, water delivery charges 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 2018, CAP set the provisional rates for 2020. Due to changes with energy market forecasts, transmission costs and water volumes, the Board revised the 2020 rates as well as the advisory rates in 2019. During the rate setting period, there appeared to be a high likelihood of a Tier 1 shortage in 2021. Subsequent to this time, a wet winter significantly changed the likelihood of a Tier 1 shortage in 2021 and it is forecasted to be a Tier Zero. In recognition of this change, the previously approved advisory rates for 2021 were revised be a Tier Zero to develop to the 2020 / 2021 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 2017 and 2018 and water delivery volume assumptions and related revenues for 2019 through 2021.

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

	2017 Actual	2018 Actual	2019 Projection	2020 Budget	2021 Budget
Volume *(Acre-feet in Thousands)*					
Municipal & Industrial	561.0	580.6	610.3	615.2	615.2
Federal	490.5	563.2	452.8	500.1	583.1
Excess					
Ag Settlement	257.9	242.8	273.9	274.7	253.9
Other	47.9	92.6	15.8	0.6	0.6
Total Water Deliveries	1,357.3	1,479.2	1,352.8	1,390.6	1,452.8
CAGRD Credit Transfer	14.9	-	39.3	13.9	15.2
Take or Pay/Adjustment	9.7	11.5	6	6	6
	1,381.9	1,490.7	1,398.1	1,410.5	1,474.0
Revenues *(Millions)*					
Water O&M Charges	$ 182.8	$ 182.3	$ 175.1	$ 184.8	$ 201.0
Capital Charges	19.7	30.3	25.3	35.3	41.7
Total Water Delivery Revenues	$ 202.5	$ 212.6	$ 200.4	$ 220.1	$ 242.7

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.

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 expenditures, the model is designed to smooth the rate and to recover the costs over several years rather than 100% in each year.

A rate stabilization component was previously incorporated into the Fixed OM&R rate in 2012 and was deposited into a separate rate stabilization reserve. Collection of the rate stabilization ended in 2018. It had a target of approximately $30 million and is projected to reach the target by the end of 2019 with accruing interest.

The rate stabilization component was designated for two purposes. The first and most important is to create a reserve to smooth out a rate increase in the event of a shortage declared on the Colorado River. In the event of a shortage, water deliveries would be decreased, which would cause the rate to increase for Fixed OM&R charges (a lower denominator). In this event, funds from the rate stabilization reserve would be used to decrease the impact of the shortage over a two- to three-year period. The second purpose of the rate stabilization component, if needed, is to provide a mechanism to stabilize rates from year-end reconciliation. Rates for M&I and federal customers are required to be reconciled each year and the reserve could be used for settlement of the difference. To date, the reserves have not been utilized for this purpose.

In 2015, long-term contract holders, which require annual rate reconciliation and settlement, were due a significant refund from the 2014 reconciliation (mostly related to energy). A program was offered to these stakeholders to deposit their refunds into a secondary voluntary rate stabilization fund. CAWCD agreed to match a portion of the amounts that were contributed to the fund. This fund would allow participants to further decrease the initial rate impacts resulting from a shortage. Based on customer request, if a shortage does not occur by the end of 2020, these funds will be refunded to the participants with the associated interest. CAWCD reserves would also be refunded the amount that was matched with interest. A significant number of stakeholders opted to participate in the program. The budget contemplates these reserves being refunded in 2021 as a Tier 1 shortage does not appear to be declared.

M&I, federal and excess (excluding Ag) customers pay the full Fixed OM&R rate. In consideration of giving up their subcontract water rights, Ag settlement pool stakeholders' Fixed OM&R is paid from ad valorem taxes.

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. Prior to 2020, it also included a cost for the decommissioning of the Navajo Generating Station (NGS). Through 2019, the majority of energy was provided through the NGS with a smaller amount for daily needs being purchased from the energy market. Starting in 2020, NGS is decommissioned and all energy is provided through long-term contracts, the energy market and Hoover (see pages 2-16 through 2-17 for additional energy information).

Capital Charges

Capital Charges are used to pay the District's annual repayment obligation to the federal government. CAWCD assesses a Capital Charge to M&I customers. These charges are based on water service subcontract allocations for M&I subcontractors and are not impacted by changes in water deliveries. Customers using excess water pay Capital Charges in the form of a facility-use charge based on scheduled water deliveries; neither federal or Ag customers pay a Capital Charge. Any repayment obligation amount not covered by Capital Charges are made up from property taxes.

Major Assumptions

- Water O&M revenues are projected to be the indicated volumes and at reconciled rates for long-term contracts and subcontracts.
- M&I Capital Charge and facility use rates will be $56/acre-foot for 2020 and $66/acre-foot for 2021.
- Financial impacts from non-Indian Ag reallocation are not included in the budget period.
- Delivery levels will be at the levels indicated on page 7-1.

CAP Picacho Pumping Plant

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 the prior revenue was generated though excess NGS power sold to SRP and the open market, which ends with scheduled closure of NGS in late 2019.

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

(Millions)	2019 Projection	2020 Budget	2021 Budget	20 vs 19 Incr/(Decr)	21 vs 20 Incr/(Decr)
SRP consideration fee	$ 28.0	$ -	$ -	$ (28.0)	$-
Net surplus power/ net NGS operations	1.3	-	-	(1.3)	-
Hoover 4.5 Mil Revenue	3.1	3.0	3.0	(0.1)	-
Parker-Davis 4.5 Mil Revenue	2.7	2.7	2.7	-	-
Net CAP Transmission Revenues	7.0	0.8	0.8	(6.2)	-
Land-Related Revenue	1.3	2.0	0.8	0.7	(1.2)
Misc NGS Revenues	0.3	0.5	0.5	.2	-
	$ 43.7	$ 9.0	$ 7.8	$ (34.7)	$ (1.2)

Major Assumptions

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

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:

(Thousands)	2019 Projection	2020 Budget	2021 Budget	20 vs 19 Incr/ (Decr)	21 vs 20 Incr/(Decr)
CAGRD Assessments	$ 44,055	$ 50,745	$ 58,712	$ 6,690	$ 7,967
O&M of Underground Storage Facilities	1,422	1,368	1,293	(54)	(75)
Land Use Charges	223	197	186	(26)	(11)
Property Disposal (Non-Capital)	8	13	11	5	(2)
Captive Insurance Premiums	10,125	10,115	10,733	(10)	618
Other	677	512	524	(165)	12
Eliminations	(10,142)	(10,124)	(10,742)	18	(618)
Total Reimbursements and Other Revenues	**$ 46,368**	**$ 52,826**	**$ 60,717**	**$ 6,458**	**$ 7,891**

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 CAGRD 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 CAGRD (e.g., federal, industrial, etc.) utilize them, an underground water storage Capital Charge is assessed to recover the costs of constructing these facilities.

CAP Underground Storage Facilities

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

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 expenditures, smoothing project O&M expenditures and other Board-approved programs. This general ad valorem property tax was first levied beginning in the 1974 / 1975 tax year.

For the 2019 / 2020 tax year, the Board set the General Ad Valorem tax rate to $0.10 and designated that $0.025 of this tax be set aside in a separate committed Extraordinary Cost reserve until such time that the Board authorizes its use. This reserve will be utilized to help address the many significant cost expenditures looming, particularly related to shortage mitigation and recovery. 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 property tax at a rate of $0.04 per $100 of NAV in Maricopa, Pinal and Pima counties. 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 to the payment or 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.

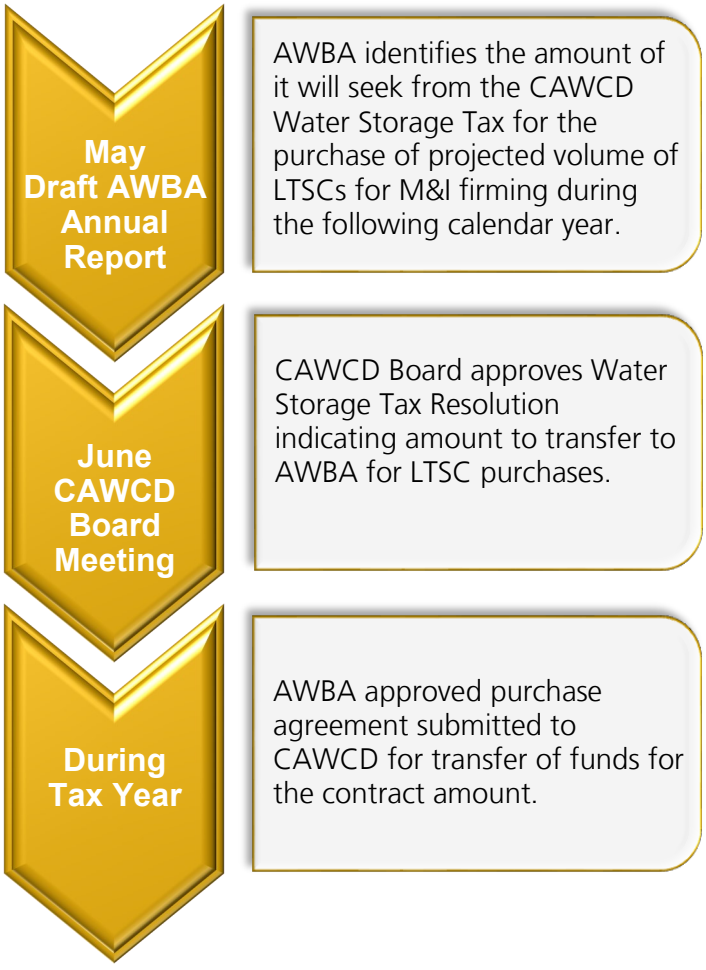
In 2014, ARS § 45-2423 was revised, allowing the AWBA to purchase LTSC. The Board subsequently approved an amendment to the existing Intergovernmental Agreement (IGA) among CAWCD, AWBA and Arizona Department of Water Resources (ADWR) that governs the way in which $.04 taxes can be used to help pay for such purchases. This IGA expired at the end of 2018 and a new IGA was entered into by the parties. The Board will continue to establish the Water Storage Tax rate and use each June under the existing statutes.

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.

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
2013-19	0.10	0.04
2019-20	**0.10**	**0.04**
2020-21	**0.10**	**0.04**
2021-22	**0.10**	**0.04**

Calendar Year	General Ad Valorem Tax *(Millions)*	Water Storage Ad Valorem Tax *(Millions)*	Total *(Millions)*
2017	$ 49.2	$ 19.6	$ 68.8
2018	51.1	20.9	72.0
2019	56.6	21.1	77.7
2020	**58.3**	**23.6**	**81.9**
2021	**61.6**	**24.9**	**86.5**

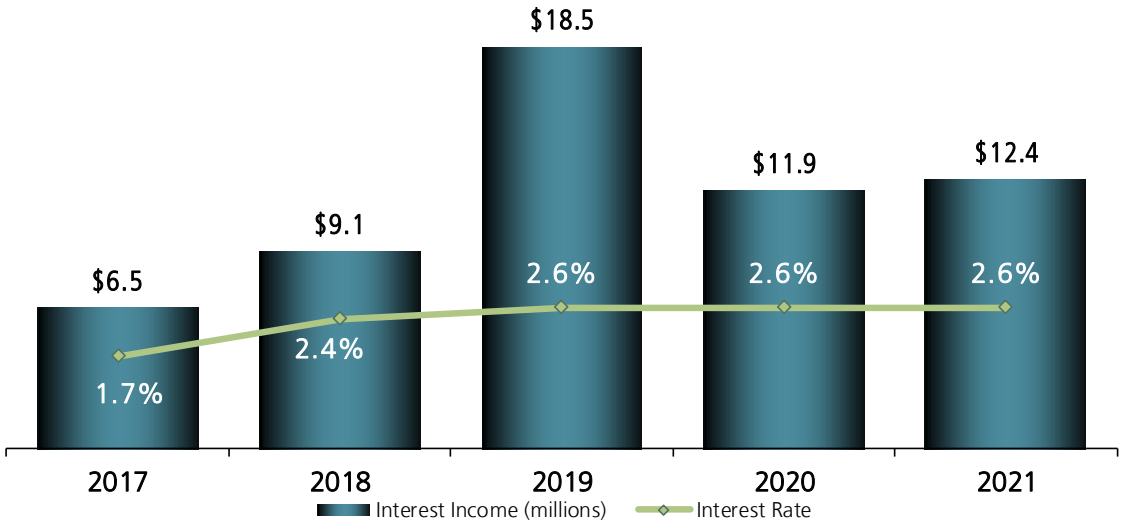
Major Assumptions

- The general ad valorem tax rate will remain at $0.10 per $100 of NAV throughout the budget period. $0.025 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

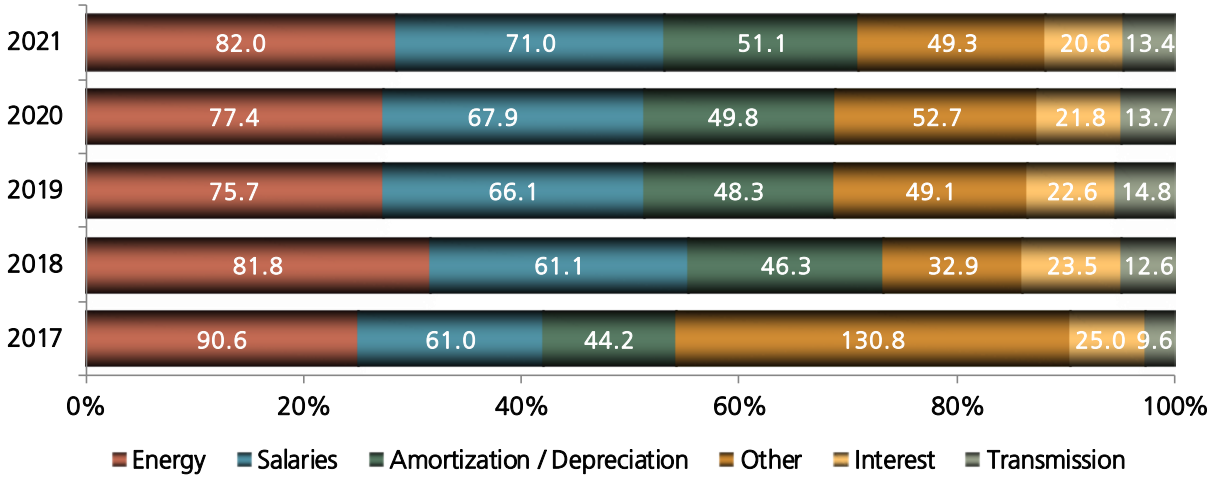
- Interest rates for funds invested with the Arizona State Treasurer will be an average of 2.6% in 2020 and 2021 based on approximately 20% short-term investments (under 1 year) and 80% longer term investments (2-5 years).

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. Pumping energy is the District's most significant expense, accounting for approximately 28% of the 2020 / 2021 budget. The second largest expense is salaries and related costs, followed by amortization and depreciation, other operating costs, interest expense and transmission expenses. The large 2017 other operating expense was the recording of the NGS decommissioning expense of over $70 million once the NGS shutdown was decided.

Total Expenses

($ Millions) - 100% scale



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

(Millions)	2019 Projection	2020 Budget	2021 Budget	20 vs 19 Incr/(Decr)	21 vs 20 Incr/(Decr)
Pumping Energy	$ 75.7	$ 77.4	$ 82.0	$ 1.7	$ 4.6
Salaries & Related Costs	66.1	67.9	71.0	1.8	3.1
Amortization & Depreciation	48.3	49.8	51.1	1.5	1.3
Other Costs	49.1	52.7	49.3	3.6	(3.4)
Interest Expense	22.6	21.8	20.6	(0.8)	(1.2)
Transmission	14.8	13.7	13.4	(1.1)	(0.3)
	$276.6	$283.3	$287.4	$ 6.7	$ 4.1

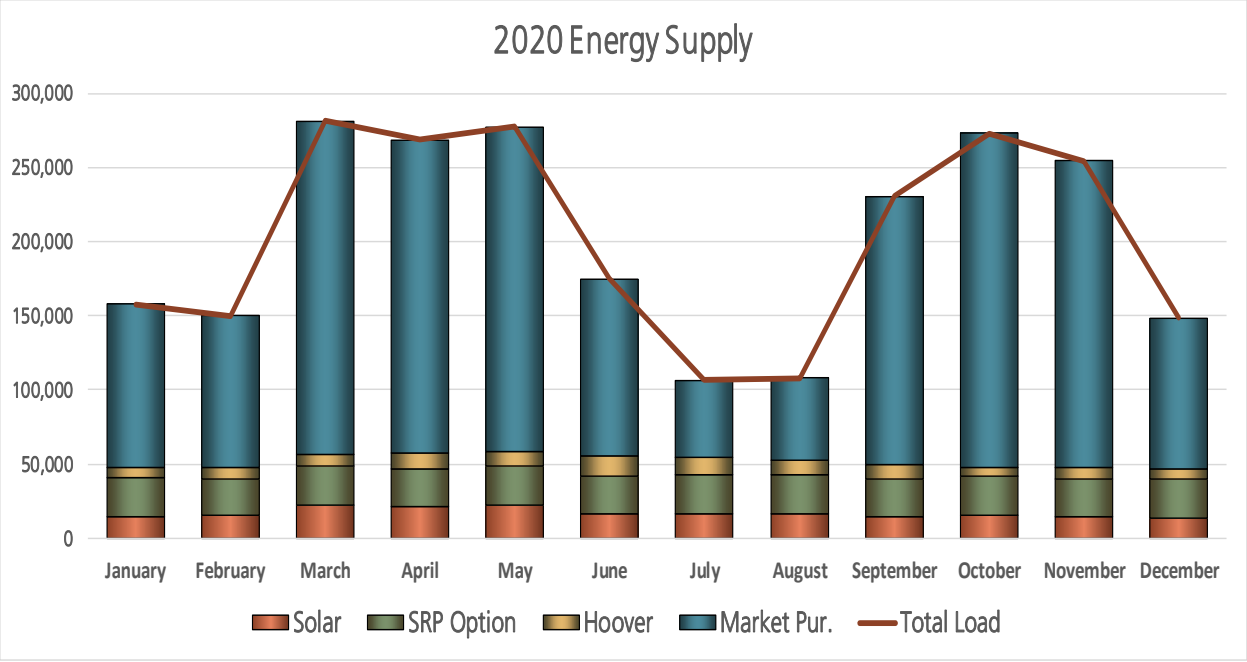
Pumping Energy

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 2,550 gigawatt hours (GWh) of energy in 2020 and 2,721 GWh in 2021 to meet the District's pumping needs.

Picacho Pumping Plant

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 energy purchase agreement for energy from a 30 megawatt (MW) solar plant, an agreement 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

Major Assumptions

- Energy market pricing will remain relatively flat during the budget period and purchases will be made at rates comparable to the current environment.
- 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. A moderate downward Lake Pleasant adjustment is expected in 2020 / 2021.

Transmission

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

Major Assumptions

- Transmission rates will remain comparable to current projections during the budget period.
- 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 second largest expense category. CAWCD's workforce is projected to be comprised of 487.5 full-time equivalent (FTE) positions for the 2020 / 2021 budget period. CAGRD has a staff of 9 FTEs that are dedicated to CAGRD 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 90% of CAWCD's workforce is dedicated to the core water delivery business, including water delivery activities, capital projects, extraordinary maintenance projects and O&M of underground storage facilities.

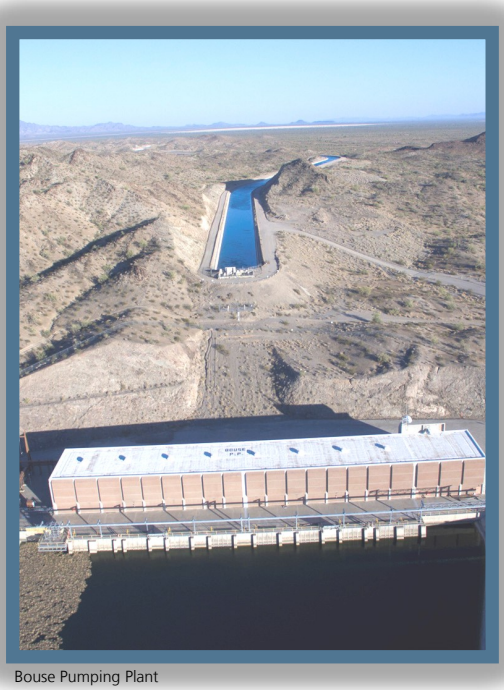
There are no FTE additions in the 2020 / 2021 budget from 2019 levels, though it is anticipated some vacant positions will be filled. Salaries and related costs are projected to increase as a result of filling of vacant positions, a shift of work from capital to operating projects (in 2021) and a budgeted 3% 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 3% per year to maintain a competitive compensation and benefits package.

Amortization and Depreciation

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.



Bouse Pumping Plant

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/year for 2020 and 2021.
- Include depreciation of $26.8 million for 2020 and $28.0 million for 2021.

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 CAGRD 2019 bonds relating to CAGRD 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.

Major Assumptions

- Federal debt interest expense is $20.1 million for 2020 and $19.0 million for 2021.
- CAWCD bond interest expense is $2.0 million for 2020 and $1.9 million for 2021.
- CAGRD bond interest expense is $0.5 million for 2020 and $0.4 million for 2021.
- CAWCD bond amortization is $0.8 million for 2020 and $0.7 million for 2021.

Other Expenses

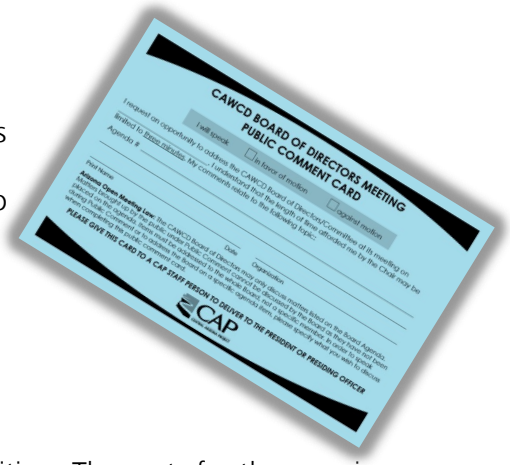
This category represents the remainder of the District's operating expenses. Operating expenses include outside services, materials and supplies, CAGRD water purchases and other business-related expenses (e.g., property and casualty insurance, rentals and Multi-Species Conservation Program expense). Transactions from internal sales and expenses such as water that CAGRD 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. CAGRD replenishment obligation expense is the largest item in other expenses.

2020 / 2021 Budget Initiatives

The following list provides some key unique initiatives or expenses during the budget period:

(Thousands)	2020 Budget	2021 Budget
Cloud Infrastructure Design Support	$ 70	$ 400
Data Analytics Initiative	$ 500	$ 500
Weather Modification Program	$ 350	$ 350
Board elections	$ 600	$ -
Binational Conservation Project (BICS)	$ -	$ 1,670
Pilot System Conservation Program	$ 440	$ -
Compensated Mitigation	$ 371	$ 406
Recovery Capacity Agreements	$ 2,500	$ 3,000
CAP Enhancements for System Use Agreement	$ 500	$ 500

CAWCD Board of Directors Initiatives



The Board President formed a Customer Service Task Force in November 2017 to examine the service that CAP provides and determine what changes may be warranted to offer the best customer service experience within CAP's atmosphere of continuous improvement. The scope of the Task Force was to identify actionable improvements to CAP customer service processes, keeping the focus on processes and not specific outcomes or decisions. As a result of these meetings, several process changes were and are being implemented, including quarterly stakeholder Roundtables on relevant topics, an on-line public testimony system, summary Board Committee meeting notes, a 45-day look ahead for Board meetings and increased Board - Stakeholder engagement opportunities. The costs for the ongoing initiatives have been included in the budget.

In addition, costs for the development of a new Board strategic plan in 2020 have been incorporated into the budget.

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.

Extraordinary Maintenance Projects

Periodically, large maintenance projects are completed. They are typically over $2 million and will cause significant year-over-year change in operating expenses. These extraordinary maintenance projects while being expensed, will be removed from expenses in the rate process and added to the capital project rate component, "Big R".

Major Assumptions

- Include costs for key initiatives, Board initiatives and other items as indicated.
- Include final costs for the Salt River siphon as Extraordinary Maintenance Projects.
- The budget will include amounts to fund activities that support the Integrated Strategic Plan.
- In 2020. Disbursements to AWBA include $6.0 million for LTSC purchases and $0.6 million for administrative costs. In 2021, 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.
- The General Fund's budget will include amounts for proper maintenance of facilities and equipment.
- The CAGRD Account will include appropriate amounts to meet its replenishment obligation and support its water acquisition program.
- The Captive Insurance Fund will include expenses that are determined through actuarial calculations.

CAPITAL EXPENDITURES

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 expenditures for vehicles and other equipment. CAWCD has a capitalization policy to determine whether major maintenance efforts should be capitalized or expensed as repairs. Capital expenditures will vary year-to-year dependent on the projects being executed and available resources. Expenditures related to the CIP are summarized in the following table:

($ Millions)	Equipment	Capital Projects	Total
2017	2.8	36.9	39.7
2018	3.0	31.7	34.7
2019	1.9	23.2	25.1
2020	3.0	41.7	44.7
2021	2.4	31.4	33.8

Detail on each capital improvement project and a detailed equipment list is located in the Capital Budget section.

New projects scheduled to start during the 2020 / 2021 budget period include:

- Electromechanical Reply Replacements Phase 2
- Fire Protection System Upgrade at Mark Wilmer
- Microwave System Replacement
- Programmable Controller (PLC) Replacements at Waddell
- SCADA Replacement at Control Center

Major ongoing projects include:

- Backup Power System Replacements at Checks & Turnouts, and Microwave sites.
- Elevator System Replacement Phase 2
- Motor Exciter & Control Unit Replacements at Brady, Picacho & Red Rock
- Motor Exciter & Control Unit Replacements at West Plants

Major projects that are scheduled to be completed in the 2020 / 2021 budget period include:

- Circuit Breaker & Compressed Air System Replacements at Mark Wilmer
- Condition-Based Monitoring
- Electromechanical Replay Replacements Phase 1
- Fire Protection System Upgrades at South Plants

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 a collection of individual accounts that have been established for a variety of specific purposes. 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 CAGRD reserves, and consequently does not result in an associated increase in strategic reserves.

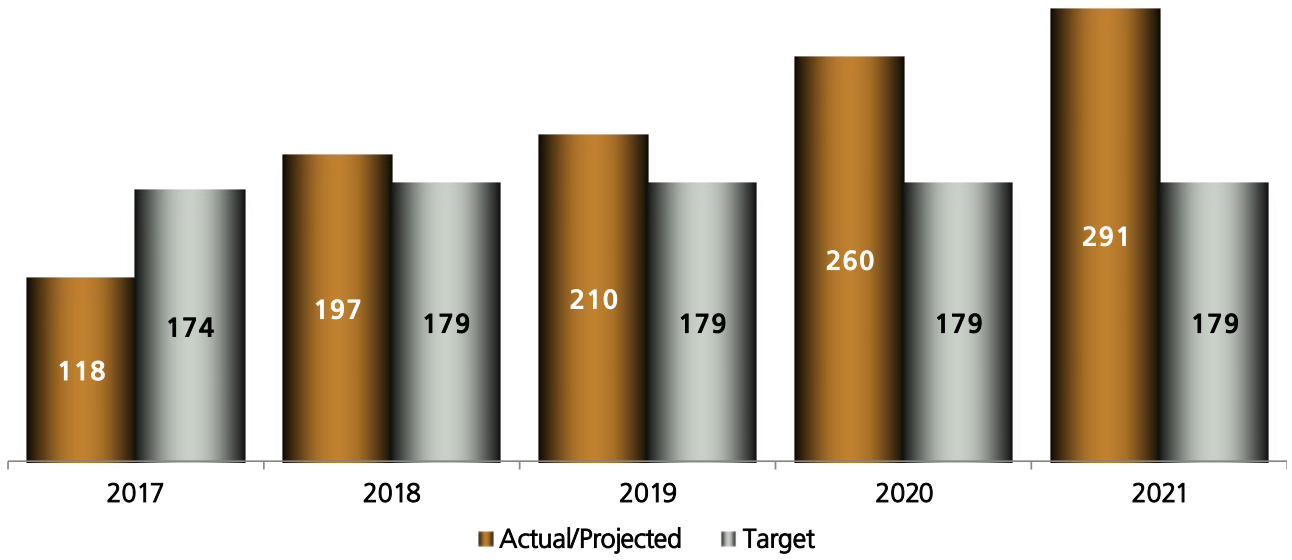
In 2018 as part of its biennial review of strategic targets, the Board revised its strategic reserve targets to $179 million. A review will be conducted in 2020 and the target may be adjusted as appropriate.

Water rates and other charges are set in such a way as to allow CAWCD to cover its costs and maintain adequate reserve level. As it is impossible to precisely break even every year due to the uncertainties associated with actual water deliveries and the fact that rates are set ahead of time, strategic reserve levels will fluctuate. In addition, fluctuations in capital spending as compared to the "Big R" revenue collection will also cause strategic reserves to fluctuate year-to-year.

Strategic reserves are projected to be above target at $260 million for 2020 and at $291 million in 2021. Though strategic reserves are forecasted to exceed budget, 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 reserve is the cause of the increase.

Strategic Reserves

($ Millions)



Selected Financial Data

Statements of Revenues, Expenses and Changes in Net Position
All Funds
(Millions)

	2017 Actual	2018 Actual	2019 Projection	2020 Budget	2021 Budget
Operating Revenues	$ 269.2	$ 280.6	$ 290.5	$ 282.0	$ 311.2
Operating Expenses	(318.3)	(232.0)	(247.1)	(255.0)	(266.3)
Operating Income/(loss)	**(49.1)**	**48.6**	**43.4**	**27.0**	**44.9**
Non-operating Revenues	75.2	81.0	97.6	93.7	98.9
Non-operating Expenses	(42.9)	(26.2)	(29.5)	(28.3)	(21.1)
Total Non-operating Revenues/(Losses)	**32.3**	**54.8**	**68.1**	**65.4**	**77.8**
Change in Net Position	(16.8)	103.4	111.5	**92.4**	**122.7**
Cumulative-effect of change in accounting principles	0.0	(14.5)	0.0	**0.0**	**0.0**
Net Position at Beginning of Period	621.8	605.0	693.9	**805.4**	**897.8**
Net Position at End of Period	**$ 605.0**	**$ 693.9**	**$ 805.4**	**$ 897.8**	**$ 1,020.5**

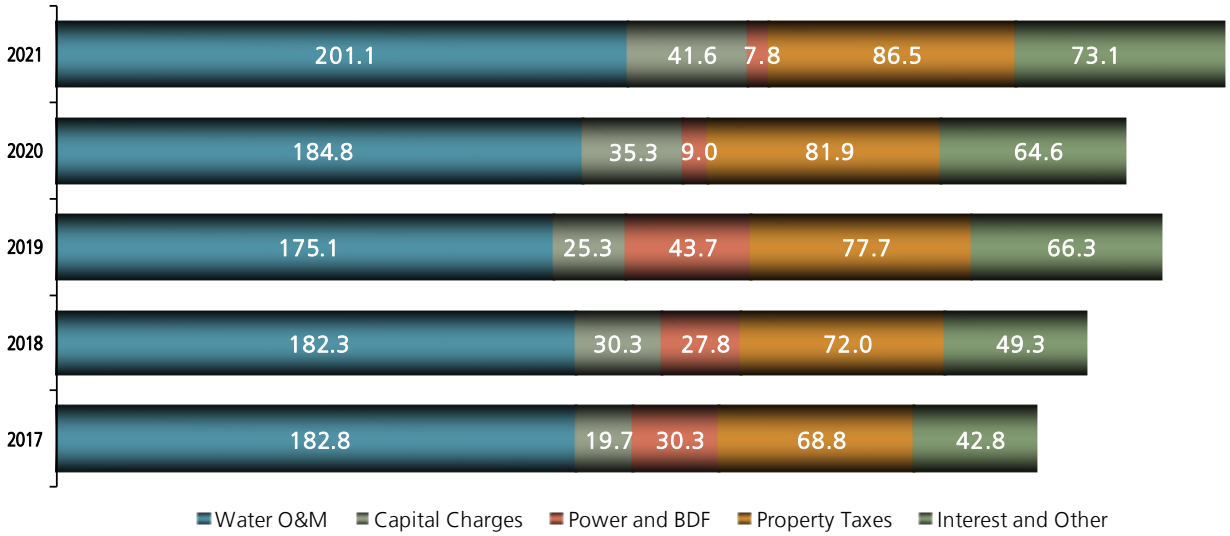
Net Position Summary
All Funds
(Millions)

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.

	2017 Actual	2018 Actual	2019 Projection	2020 Budget	2021 Budget
Assets					
Cash and investments	$ 428.1	$ 491.7	$ 447.5	**$ 500.0**	**$ 567.5**
Receivables	47.2	47.9	51.2	**54.3**	**58.9**
Water inventory	104.3	100.8	201.6	**213.0**	**217.7**
Capital assets					
Operating assets, net	285.4	296.9	299.0	**317.0**	**322.7**
Permanent service right, net	1,112.2	1,089.0	1,065.8	**1,042.8**	**1,019.8**
Agricultural water allocation	88.7	88.7	88.7	**88.7**	**88.7**
Other Assets	127.6	116.7	129.5	**117.9**	**131.5**
Total Assets	2,193.5	2,231.7	2,283.3	**2,333.7**	**2,406.8**
Deferred Outflow of Resources					
Pension valuation	6.8	11.1	11.1	**11.1**	**11.1**
Total Deferred Outflow of Resources	6.8	11.1	11.1	**11.1**	**11.1**
Total Assets & Deferred Outflow of Resources	$ 2,200.3	$ 2,242.8	$ 2,294.4	**$ 2,344.8**	**$ 2,417.9**
Liabilities					
Repayment obligation	$ 1,109.7	$ 1,076.8	$ 1,043.9	**$ 1,010.9**	**$ 978.0**
Bonds	51.3	49.0	66.6	**62.8**	**56.8**
Non-Indian agriculture 9(d) debt	88.7	88.7	88.7	**88.7**	**88.7**
Other liabilities	310.7	286.2	232.3	**217.7**	**213.1**
Total Liabilities	1,560.4	1,500.7	1,431.5	**1,380.1**	**1,336.6**
Deferred Inflow					
Customer deposits	29.9	31.0	40.4	**49.8**	**43.7**
Pension valuation	5.0	17.1	17.1	**17.1**	**17.1**
Total Deferred Inflow	34.9	48.1	57.5	**66.9**	**60.8**
Net Position					
Investment in Capital Assets, less related debt	248.0	260.1	272.3	**302.6**	**320.7**
Restricted	84.6	100.5	61.3	**85.1**	**100.9**
Unrestricted	272.4	333.4	471.8	**510.1**	**598.9**
Total Net Position	605.0	694.0	805.4	**897.8**	**1,020.5**
Total Liabilities, Def Inflows & Net Position	$ 2,200.3	$ 2,242.8	$ 2,294.4	**$ 2,344.8**	**$ 2,417.9**

Total Revenues
(Millions)

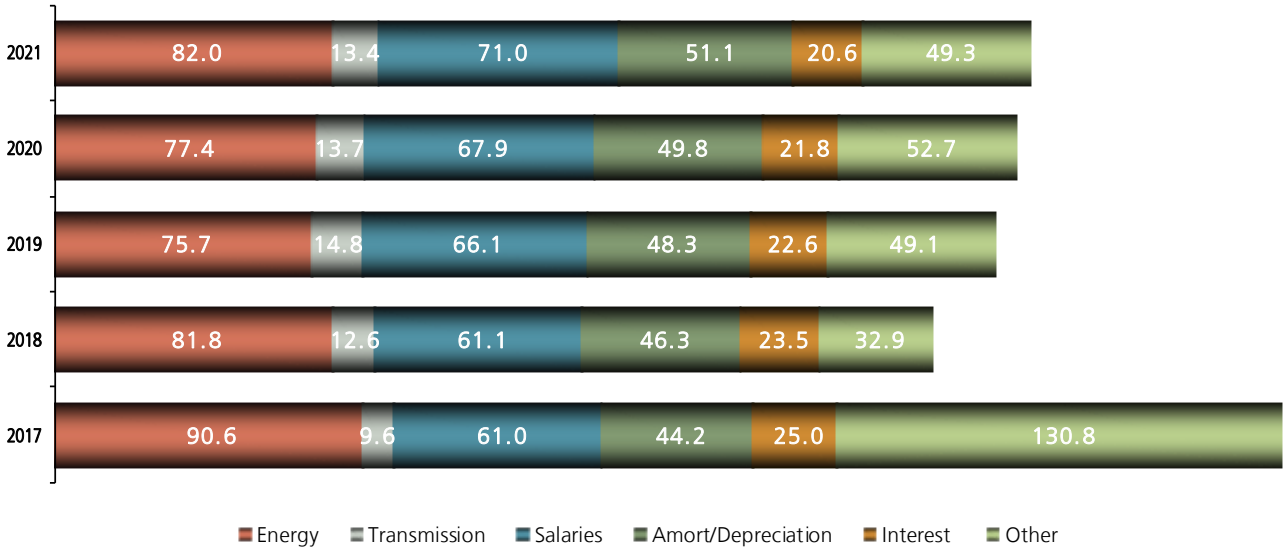
	2017 Actual	2018 Actual	2019 Projection	2020 Budget	2021 Budget
General Fund Operating					
Water O&M charges	190.6	186.8	184.4	**190.7**	**207.2**
Water service capital charges	21.2	32.3	27.9	**35.8**	**42.2**
Power & BDF revenues	30.2	27.8	43.8	**9.0**	**7.8**
Other revenue	1.9	1.9	2.3	**2.1**	**2.0**
Total General Fund Operating	**243.9**	**248.8**	**258.4**	**237.6**	**259.2**
General Fund Non-operating					
Property taxes	68.8	72.0	77.7	**81.9**	**86.5**
Interest and other	5.8	7.5	18.5	**11.0**	**11.5**
Total General Fund Non-operating	**74.6**	**79.5**	**96.2**	**92.9**	**98.0**
General Fund Total	**318.5**	**328.3**	**354.6**	**330.5**	**357.2**
Other Funds and Accounts					
CAGRD	36.3	39.9	45.1	**51.4**	**59.3**
Supplemental Water	0.1	0.1	0.4	**0.2**	**0.3**
Captive Insurance	8.8	9.1	10.1	**10.1**	**10.7**
Eliminations	(19.3)	(15.8)	(22.1)	**(16.5)**	**(17.4)**
Total Revenue	**$ 344.4**	**$ 361.6**	**$ 388.1**	**$ 375.7**	**$ 410.1**



Total Expenses
(Millions)

	2017 Actual	2018 Actual	2019 Projection	2020 Budget	2021 Budget
General Fund Operating					
Pumping energy	$ 90.6	$ 81.8	$ 75.7	$ 77.4	$ 82.0
Transmission	9.6	12.6	14.8	13.7	13.4
Salaries and related costs	59.9	59.9	65.0	66.7	69.7
Amortization and depreciation	44.2	46.3	48.2	49.7	51.0
Other expenses	104.7	30.2	37.8	37.5	37.8
Total General Fund Operating	309.0	230.8	241.5	245.0	253.9
General Fund Non-operating					
Interest and other	42.9	26.2	29.3	27.8	20.7
Total General Fund Non-operating	42.9	26.2	29.3	27.8	20.7
General Fund Total	351.9	257.0	270.8	272.8	274.6
Other Funds and Accounts					
CAGRD	19.8	5.5	18.2	17.6	20.8
Supplemental Water	-	-	-	-	-
Captive Insurance	8.8	11.5	9.7	9.4	9.4
Eliminations	(19.3)	(15.8)	(22.1)	(16.5)	(17.4)
Total Expenses	$ 361.2	$ 258.2	$ 276.6	$ 283.3	$ 287.4

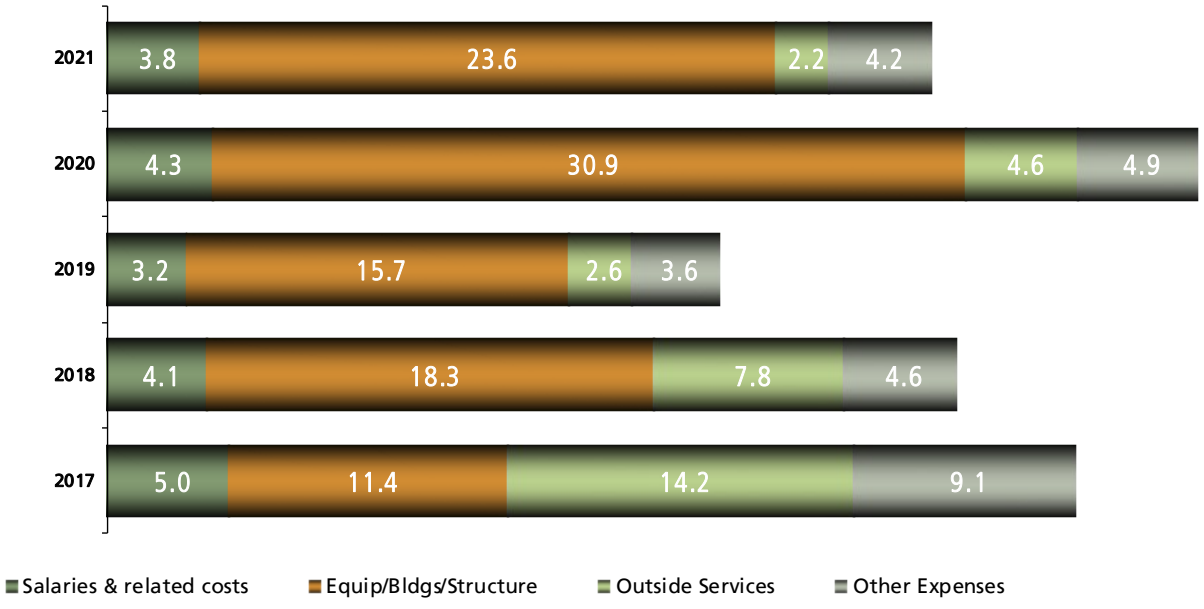
All Funds by Expense Type *($ Millions)*



Capital Expenditures
(Millions)

	2017 Actual	2018 Actual	2019 Projection	2020 Budget	2021 Budget
Salaries and related costs	$ 5.0	$ 4.1	$ 3.2	$ 4.3	$ 3.8
Equipment, buildings, and structures	11.4	18.3	15.7	30.9	23.6
Outside services	14.2	7.8	2.6	4.6	2.2
Materials, supplies & other expenses	0.6	0.5	0.4	0.4	0.3
Capitalized interest	3.3	-	-	-	-
Overhead expenses	5.2	4.1	3.2	4.5	3.9
Total Capital	$ 39.7	$ 34.8	$ 25.1	$ 44.7	$ 33.8

Capital Expenditures by Type *($ Millions)*



Colorado River

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