

CENTRAL ARIZONA PROJECT

2022 | 2023
BIENNIAL

Budget

CAP 2022-2023 Budget Briefing

October 14, 2021

Chris Hall

Doug Dunlap

Darrell Funk

YOUR WATER. YOUR FUTURE.



Agenda

- Current Challenges
- Key Budget Messages
- Key Assumptions
- General Fund Overview
- Rate Reconciliation
- CAWCD Underground Water Storage Program
- Capital Improvement Program Overview
- CAGRD Account
- Captive Insurance Fund
- Supplemental Water Account

Current Challenges Facing CAWCD

- Shortage declarations financial and operational impacts
- Aging Infrastructure & potential for unplanned events; result in financial and operational impacts
- Increasing material costs are making repairs and capital improvement projects more costly
- Staff turnover increasing; difficulty in recruiting qualified, experienced candidates
- Energy market is seeing significant increases, driving up energy costs and resulting energy rate
- Insurance market is seeing 30%+ premium increases in many areas

Key Budget Messages

- Revenue projections based on reconciled rates for long-term contracts
- All essential work for 2022/2023 is included in the budget
- Expenses included in the budget that are being proposed to be funded from alternative sources are \$16.0 million in 2022 and \$15.6 million in 2023
 - Details on following slides
- 2022 & 2023 include compensated mitigation costs of \$14.7 million and \$12.7 million respectively as well as the associated volumes to ensure rate neutrality (no impact on the Fixed O&M rate)
- Capital and extraordinary maintenance costs are within current “Big R” rates
- No additional staffing (FTE) requested from 2021 level, 2 additional FTE added in 2021 from original budget
- Strategic & Working Capital reserves remain at or above target for budget period

Key Budget Messages

- CAP water volume (including CAGR credit purchases & Take or Pay):
 - 1,374,578 a/f in 2021 (Tier Zero, net of 93,000 acre-feet in agreed-upon reductions)
 - 1,244,515 a/f in 2022 (Tier 1 shortage)
 - 1,117,714 a/f in 2023 (Tier 2a shortage)
- Tax rates at \$0.10 for the general ad valorem and \$0.04 for the water storage tax with same use allocation as 2021
- \$7.5 million water storage tax transfers to AWBA for credit purchases in 2022
 - \$4M for Maricopa & \$3M for Pima & \$0.5 million for Administrative

Key Budget Messages

- Rate schedule reflects current 2022 published rates and modified 2023 Tier 2a rates

Fixed O&M rate

- 2022 is \$1.64 higher than published T1 rate
- 2023 is \$7.06 higher than advisory T2a rate

Fixed O&M variance is mainly related to water volume variances related to DCP shortage mitigation implementation

Energy rate

- 2022 is \$0.32 per acre-foot lower than published rate
- 2023 is \$4.06 per acre-foot higher than published rate

2023 energy variance is due to increases in forward market prices

Key Assumptions

- Budget was built from Department detail
- No contingencies built into budget
- Certain identified programs are assumed to be funded from sources other than Fixed O&M but are dependent on Board decisions
- Average merit increases set at 5% each year based on recent market surveys
- Energy based on current long-term contracts and projections
 - Long-term contracts account for ~25% of energy needs
 - Purchased ~80% of energy needs for 2022 and ~40% of needs for 2023
 - Remainder of cost is based on forward energy price indices

Key Assumptions

CAGR Account

- Membership dues continue for budget period
- Revenue and water costs based on Tier 1 for 2022 and Tier 2a for 2023
- NIA payments begin in 2021 and continue through budget period

Captive Insurance Fund

- Premiums are actuarially-based
- No unusual or extraordinary claim expenses

Supplemental Water Account

- No anticipated expenditures

Staffing

	2019 Actual	2020 Actual	2021 Projection	2022 Budget	2023 Budget
Management Council	12.2	12.0	11.8	12.0	12.0
Water Policy	15.7	16.8	17.0	17.0	17.0
Finance & Administration	85.2	83.2	85.6	88.0	88.0
Public Affairs	14.2	16.1	16.8	17.0	17.0
Legal Services	5.0	5.0	5.0	5.0	5.0
Operations & Engineering	84.6	83.3	89.0	89.0	89.0
Centralized Maint & Reliability	108.1	108.3	110.3	114.0	114.0
Field Maintenance	125.4	122.1	126.9	129.0	129.0
Employee Services	32.0	29.6	30.8	33.5	33.5
Vacancy Savings Equivalent			(7.3)	(15.0)	(15.0)
Total	482.4	476.4	485.9	489.5	489.5

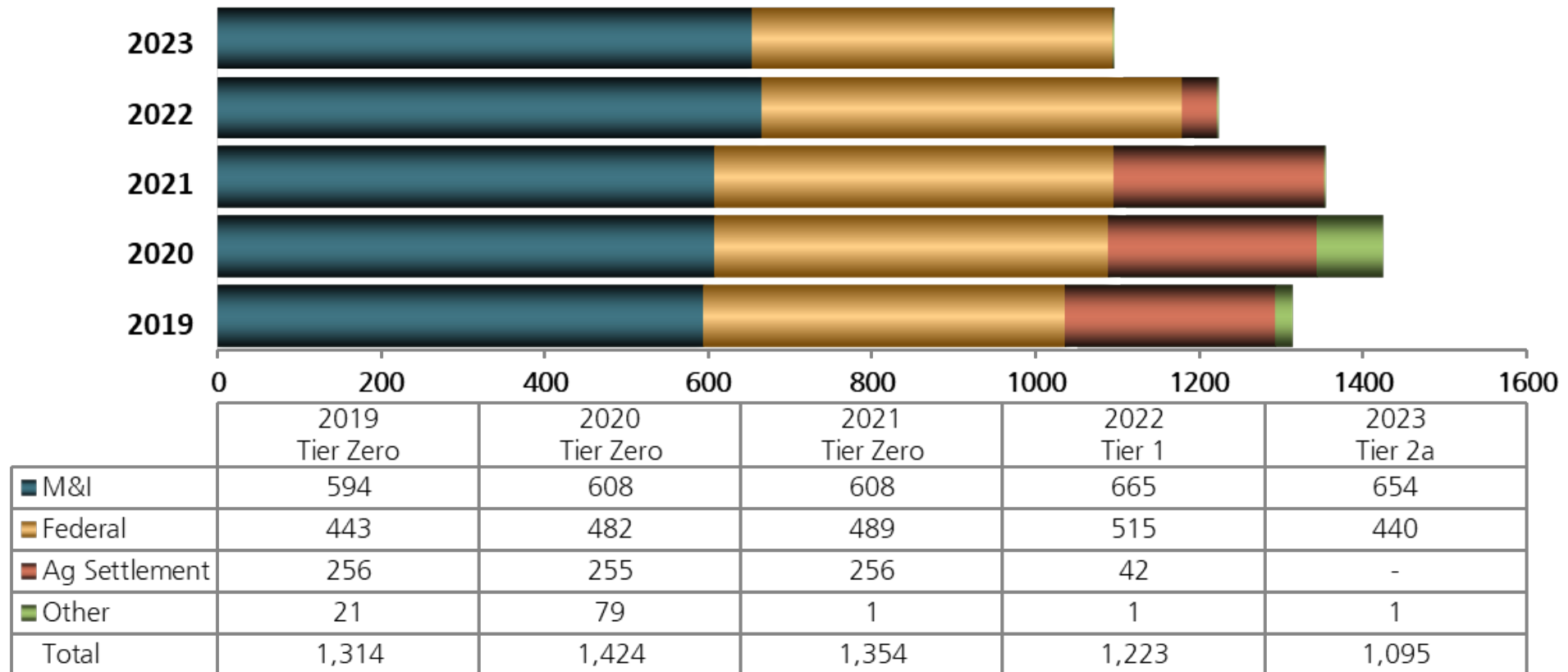
2021 Budget (net)

487.5

Water Deliveries

Water Deliveries

(Acre-feet in Thousands)

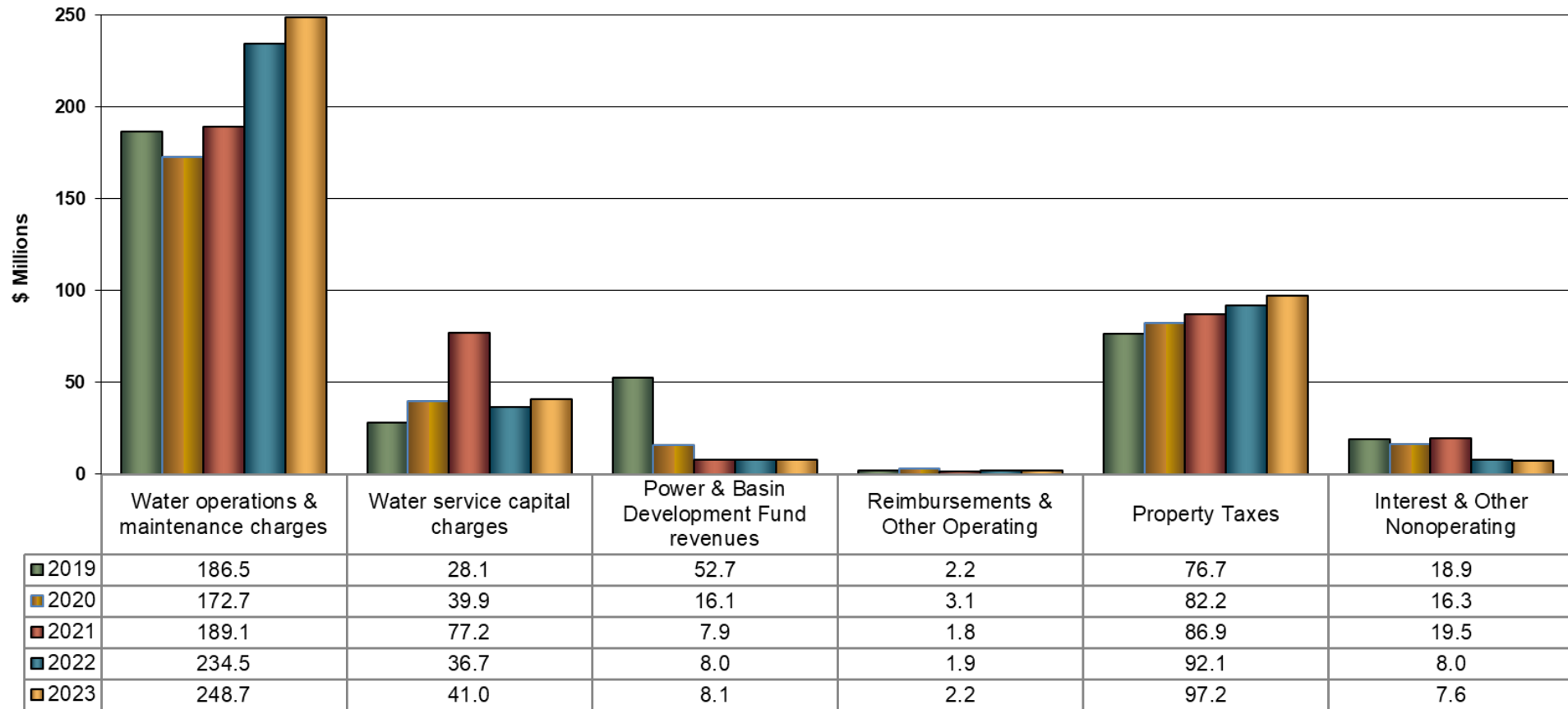


■ M&I ■ Federal ■ Ag Settlement ■ Other ■ Total



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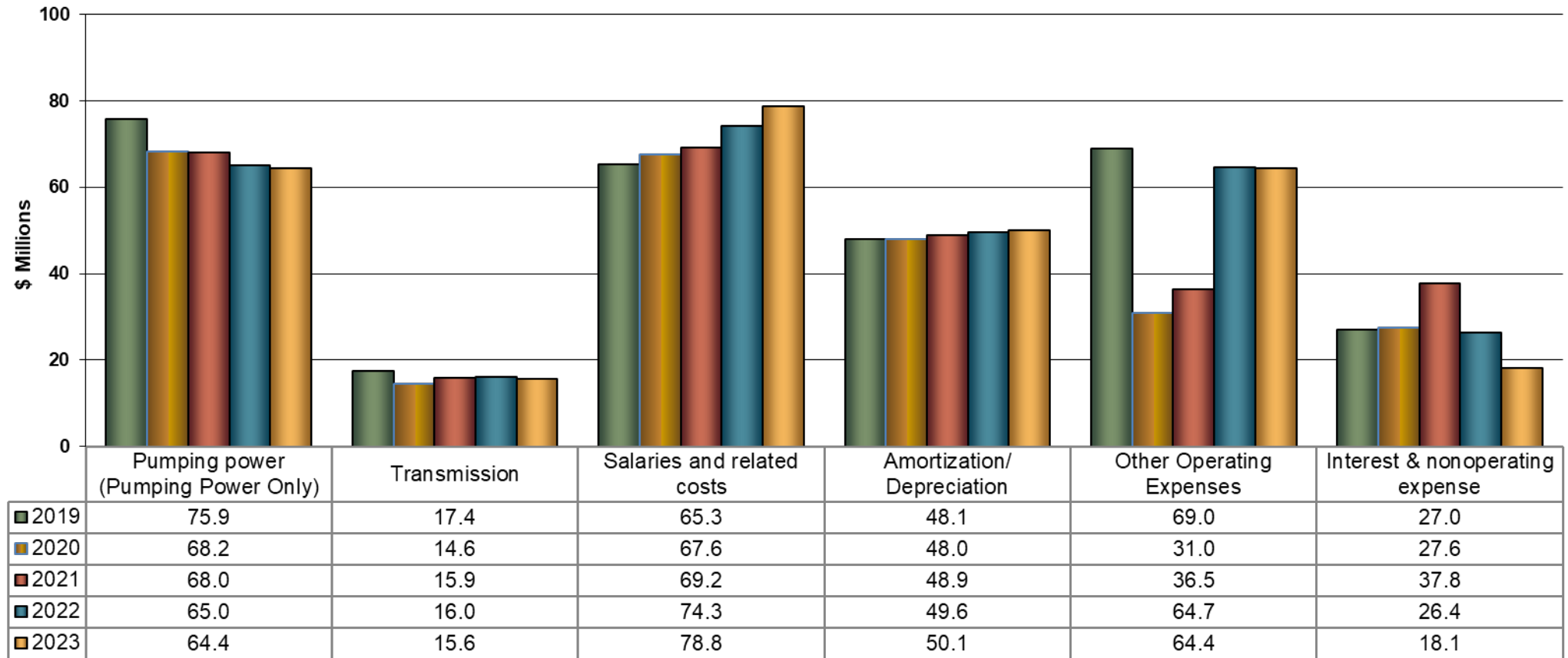
General Fund Revenue



General Fund Revenue

(Thousands)	2019 Actual	2020 Actual	2021 Projection	2022 Budget	2023 Budget
Water Deliveries with credits (K a-f)	1,374	1,441	1,375	1,245	1,118
DCP Tier	Zero	Zero	Zero	1	2a
Operating Revenues					
Water operations & maintenance charges	\$ 186,452	\$ 172,740	\$ 189,050	\$ 234,504	\$ 248,741
Water service capital charges	28,053	39,904	77,179	36,698	40,984
Power & basin development fund revenues	52,703	16,079	7,928	8,040	8,130
Reimbursements and other revenues	2,233	3,049	1,825	1,881	2,144
Total Operating Revenues	269,441	231,772	275,982	281,123	299,999
Non-operating Revenues					
Property taxes	76,718	82,233	86,916	92,079	97,194
Interest income and other revenues	18,904	16,293	19,478	8,016	7,643
Total Non-operating Revenues	95,622	98,526	106,394	100,095	104,837

General Fund Expenses



General Fund Expenses

	2019 Actual	2020 Actual	2021 Projection	2022 Budget	2023 Budget
Operating Expenses					
Salaries and related costs	(65,340)	(67,655)	(69,140)	(74,325)	(78,912)
Pumping energy & Capacity Charges	(75,900)	(68,157)	(68,046)	(64,956)	(64,410)
Transmission	(17,415)	(14,578)	(15,912)	(16,037)	(15,580)
Amortization of permanent service right	(23,162)	(23,001)	(23,001)	(23,001)	(21,782)
Depreciation and Amortization	(24,916)	(24,991)	(25,882)	(26,612)	(28,299)
Other operating expenses					
Outside services	(28,543)	(19,321)	(24,081)	(50,377) *	(48,751) **
Materials and supplies	(7,834)	(8,120)	(9,004)	(8,912)	(9,019)
Overhead	4,383	4,611	4,669	5,792	5,274
Other expenses	(37,043)	(8,165)	(8,075)	(11,226)	(11,890)
Subtotal	(69,037)	(30,995)	(36,491)	(64,723)	(64,386)
Total Operating Expenses	(275,770)	(229,377)	(238,472)	(269,654)	(273,369)
Non-operating Expenses					
Disbursements to AWBA	(4,561)	(6,361)	(10,344)	(7,545)	(545)
Interest and uncollectable tax expense	(22,403)	(21,295)	(27,501)	(18,843)	(17,479)
Total Non-operating Expenses	(26,964)	(27,656)	(37,845)	(26,388)	(18,024)

* Includes \$14.7 million in Compensated mitigation and \$16.0 million in special programs not funded from O&M

** Includes \$12.7 million in Compensated mitigation and \$15.6 million in special programs not funded from O&M

Costs with Alternative Funding Sources

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

Water Delivery Rate Reconciliation

Water Delivery Costs (Thousands)

Fixed O&M Expenses

Total Pumping Energy Expenses

Water Deliveries (Acre-Feet)

Total water deliveries with credits

Take or Pay adjustment

Billed Fixed OM&R Water Volume

Pumping Energy Rate 1 Water Volume

Water Delivery Rate (\$/AF)

Calculated Fixed O&M Rate

Capital Replacement Component ("Big R")

Total Fixed OM&R

Calculated Pumping Energy Rate

Total Pumping Energy Rate

Total Delivery Rate

2022		2023	
Budget	Published Rate	Budget	Advisory Rate
\$ 130,227	\$ 114,308	\$ 134,194	\$ 116,233
68,966	61,934	67,882	57,599
1,238,515	1,105,050	1,111,714	1,025,050
6,000	6,000	6,000	6,000
1,244,515	1,111,050	1,117,714	1,031,050
1,238,515	1,105,050	1,111,714	1,025,050
\$ 104.64	\$ 103.00	\$ 120.06	\$ 113.00
33.00	33.00	42.00	42.00
137.64	136.00	162.06	155.00
55.68	56.00	61.06	57.00
55.68	56.00	61.06	57.00
\$ 193.32	\$ 192.00	\$ 223.12	\$ 212.00

Underground Storage

(Thousands)	2019 Actual	2020 Actual	2021 Projection	2022 Budget	2023 Budget
Water Deliveries (acre-feet in thousand)	121	204	111	96	117
Total revenues	\$ 1,677	\$ 2,772	\$ 1,544	\$ 1,354	\$ 1,630
Total expenses	(1,185)	(1,734)	(1,169)	(1,319)	(1,545)
Change in net position	\$ 492	\$ 1,038	\$ 375	\$ 35	\$ 85
Expense Summary					
Agua Fria	\$ (154)	\$ (81)	\$ (63)	\$ (105)	\$ (110)
Hieroglyphic Mountains	(274)	(266)	(295)	(172)	(235)
Lower Santa Cruz	(387)	(476)	(374)	(473)	(511)
Pima Mine Road	(94)	(155)	(91)	(209)	(215)
Superstition Mountain	(255)	(316)	(273)	(230)	(340)
Tonopah	(21)	(440)	(73)	(130)	(134)
Total expenses	\$ (1,185)	\$ (1,734)	\$ (1,169)	\$ (1,319)	\$ (1,545)

Capital Spending Overview

(Millions)	2019 Actual	2020 Actual	2021 Projection	2022 Budget	2023 Budget
Capital Equipment	\$ 1.8	\$ 3.7	\$ 2.7	\$ 5.2	\$ 5.1
Capital Projects	24.3	29.3	29.4	32.9	36.8
Totals	\$ 26.1	\$ 33.0	\$ 32.1	\$ 38.1	\$ 41.9

Previous Budget \$ 44.7 \$ 33.8

- Spending is above “Big R” published rates but brings collections and spending in alignment
- The Capital Improvement Program(CIP) includes 33 projects during the budget period
- Capital budget is managed by the Project Steering Committee (PSC)

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Capital Improvement Projects Overview

Darren Couturier

Project Management
Supervisor

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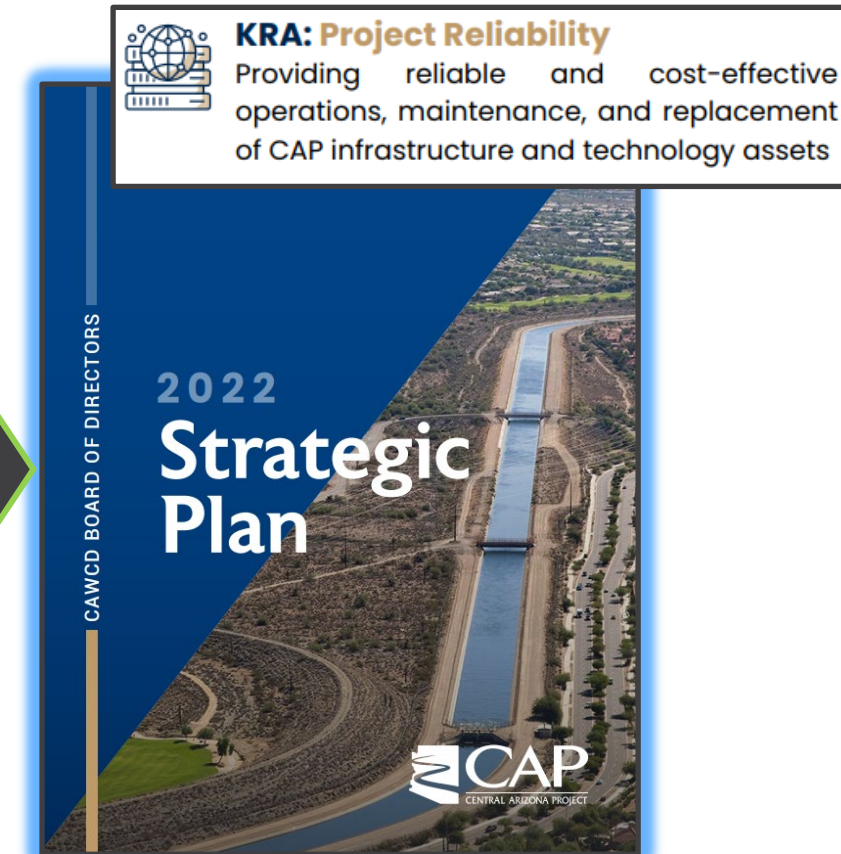
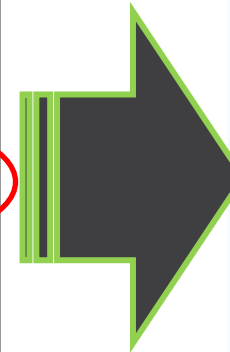


Capital Improvement Projects

- ❖ Project Selection and Project Steering Committee
- ❖ 2022-2023 Capital Project Highlights
- ❖ Construction Market Conditions

2022-2023 Capital Budget - Projects

(Millions)	2019 Actual	2020 Actual	2021 Projection	2022 Budget	2023 Budget
Capital Equipment	\$ 1.8	\$ 3.7	\$ 2.7	\$ 5.2	\$ 5.1
Capital Projects	24.3	29.3	29.4	32.9	36.8
Totals	\$ 26.1	\$ 33.0	\$ 32.1	\$ 38.1	\$ 41.9
<i>Previous Budget</i>		\$ 44.7	\$ 33.8		



Prioritizing and Constructing Capital Projects

Implementation Strategy

- Decisions Based on Asset Criticality and Condition
- Risk Register – Communicate and Collaborate Across All Departments
- Balance Resources with Unit Availability – Cost and Timing

CONDITION ASSESSMENTS										
PLEASE USE CTRL+CLICK TO NAVIGATE TO CORRESPONDING GIS LOCATION.										
Plant	M01	M02	M03	M04	M05	M06	M07	M08	M09	M10
MWP	C	A	B	B	B	A				
BSH	A	A	A	A	A	B	A	C	A	
LHQ	A	A	B	A	A	B	A	A	A	
HSY	A	A	A	A	A	A	B	A	A	
WAD	A	A	B	A	A	B	B	A		
SGL	C	C	C	B	B	C	C	B	C	C
BRD	A	B	B	B	A	B	A	A		
PIC	B	B	A	A	A	A				

CAP Risk Register CENTRAL ARIZONA PROJECT														
ID	Type	Status	RPN	PPN	Impact Score	Location	Description	Phase	Planned Budget Year	Est Labor Hours	Est Non Labor Costs	Equipment	Parent WO	Work Mgmt MRC
365	Project Request	RPA	9	1	6 - Critical	SGL	Discharge Pipe and Manifold Reline (LT)	Planning	2023	0	\$1,500,000	SGLDISCHLT	781274	545
	Project Request	RPA	9	5	6 - Critical	SGL	Discharge Pipe and Manifold Reline (LT)	Planning	2024	0	\$2,500,000	SGLDISCHLT		545
	Project Request	U	9	4	6 - Critical	WAD	RT - Discharge Manifold, Pipes, Tunnels, and Bypass Pipes Reline	Forecast	2024	0	\$4,556,538	WADDISCHRT		545
	Project Request	U	9	5	6 - Critical	WAD	LT - Discharge Manifold, Pipes, Tunnels, and Bypass Pipes Reline	Forecast	2026	3,000	\$4,556,538	WADDISCHLT		545
	Project Request	U	9	3	6 - Critical	LHQ	LHQ Right Discharge Manifold Reline	Forecast	2026	3,500	\$1,500,000	LHQDISCHRT		545
	Project Request	AM	9	9	4 - Severe	Multi	EM Relay Replacement	Approved	2019	25,000	\$8,000,000	PP	658233	545
	Project Request	AM	9	8	6 - Critical	WAD	PLC-5 Replacement	Approved	2021	12,500	\$5,500,000	PP		545
	Project Request	AM	9	5	4 - Severe	MWP	MWP Cooling Water Treatment System	Approved	2020	3,500	\$1,400,000	PP	728928	545
3	Project Request	RPA	9	9	4 - Severe	TWP, SAN, SND & BLK	Replace TWP/SAN/SND/BLK Unit Motor Exciter Rotating Packages	Planning	2022	8,000	\$8,000,000	PP	749644	545
93	Project Request	CAN	9	5	4 - Severe	Waddell P/G	Waddell High Voltage Non Segregated Phase Bus Evaluation	Rejected/Cancelled	2022	4,000	\$3,000,000	WADHVDKW1A	745837	545
38	Project Request	RPA	9	4	6 - Critical	Bouse Hills Pumping Plant	BSH Reline Discharge Manifold - Right	Planning	2024	1,000	\$1,000,000	BSHDISCH		545
14	Project Request	RPA	9	4	6 - Critical	Mark Wilmer Pumping Plant	Reline Mark Wilmer Suction Tube Liners and Stilling Well	Planning	2023	2,000	\$3,600,000	MWPINLET	728718	545
10040	Project Request	RPA	8	NULL	2 - Serious	Multiple	Flowmeter Replacements - Multiple Locations Along the CAP Canal	Planning	2022	0	\$400,000	AFSTO	785596	545
369	Project Request	U	8	6	6 - Critical	WAD	Unit Breaker Replacement (U2, U3, U6, U7)	Forecast	2028	4,500	\$4,400,000	PP		545
368	Project Request	U	8	6	6 - Critical	HSY	Unit Breaker Replacement (U4, U5, U6, U7)	Forecast	2026	4,500	\$4,400,000	PP		545
354	Project Request	AM	8	9	4 - Severe	Multi	Condition Based Monitoring Project	Approved	2019	40,000	\$11,000,000	PP	625402	545

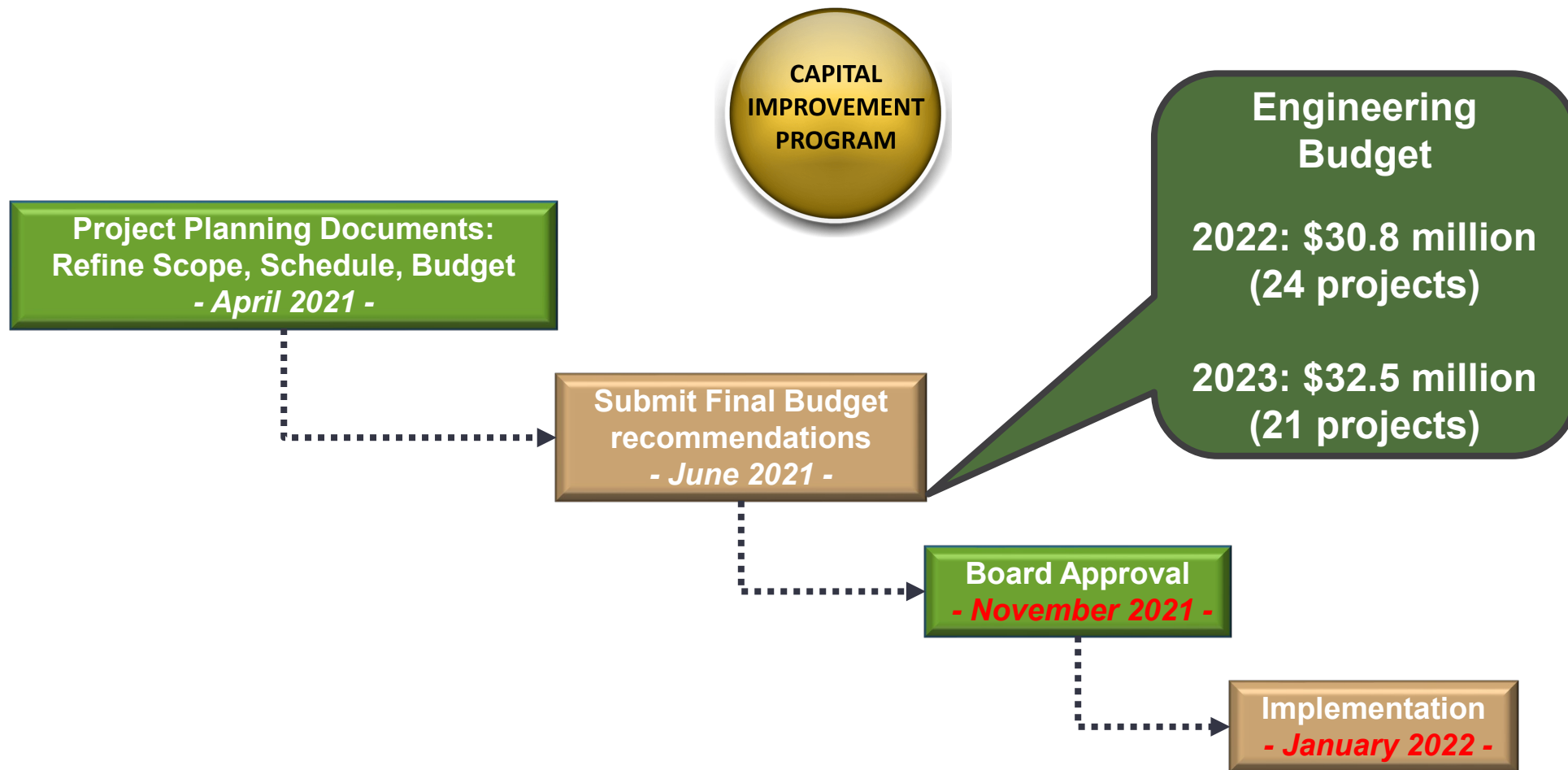
Project Steering Committee (PSC)



Scope

- Capital Portfolio Management
 - \$250K and up
 - Monthly meetings
- Approve the right projects for CAP Biennial Budget
 - Strategic fit & Opportunity Cost
- Project cost and schedule variance

2022-2023 Capital Budget - *Engineering*



Capital Project Highlights for 2022-2023 Budget

Coffer Dam Design and Fabricate

Fire Protection System Upgrade at Mark Wilmer Pumping Plant

Heating/Ventilation/Air Conditioning Replacement at Headquarter, Building 2

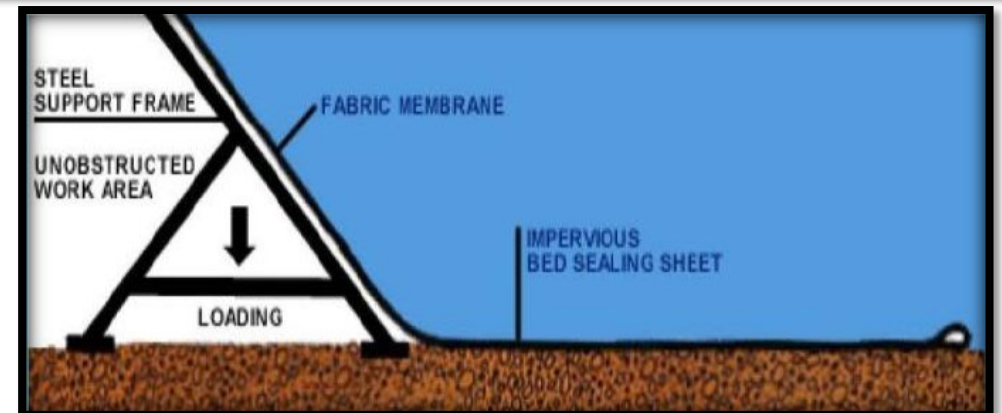
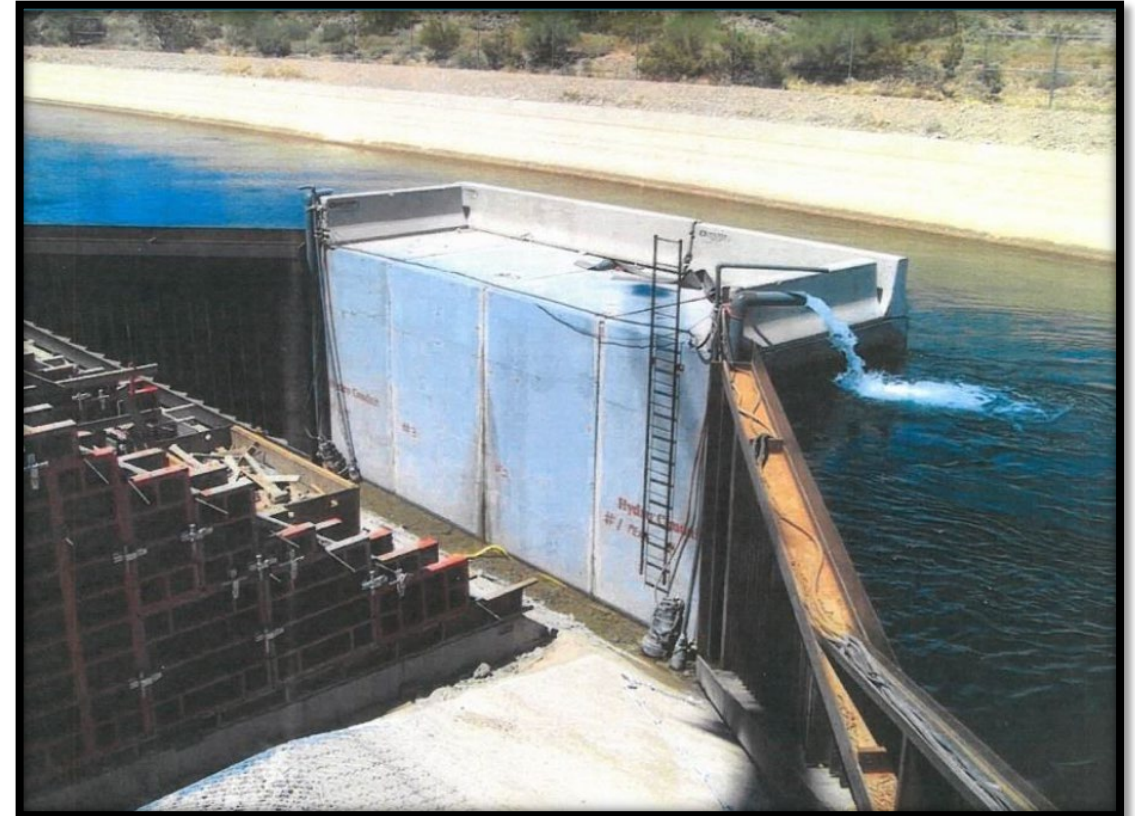
Machine Shop Overhead Crane Improvements

SCADA Replacement at Headquarters Control Center

Coffer Dam Design and Fabricate

- Maintenance access to middle and lower panels - minimize operational impacts
- Alternative design concept evaluation
- Mobile systems for southern and western canal prisms – extend up to 200 feet

Cost (in \$000s)			
Total	Pre-2022	2022	2023
\$2,241	\$937	\$1,304	\$ -



Fire Protection System Upgrade at Mark Wilmer Pumping Plant

- Fire protection systems outdated, obsolete, and failing
- Various fire events modeled to evaluate egress requirements
- Upgrading wet sprinkler, fire alarm/monitoring, motor rooms, control room, fire pump, and switchyard suppression

Cost (in \$000s)				
Total	Pre-2022	2022	2023	2024
\$7,962	\$956	\$4,314	\$ 2,692	\$ -



Heating/Ventilation/Air Conditioning (HVAC) Replacement at HQ, Bldg. 2

- Existing cooling systems obsolete, prone to failure, and inadequate for hotter months
- New system will provide suitable environmental controls for employees and equipment storage
- Install new, roof-mounted, “packaged” units with higher efficiency with automated control system

Cost (in \$000s)					
Total	Pre-2022	2022	2023	2024	2025
\$6,530	\$ -	\$644	\$4,853	\$1,033	\$ -

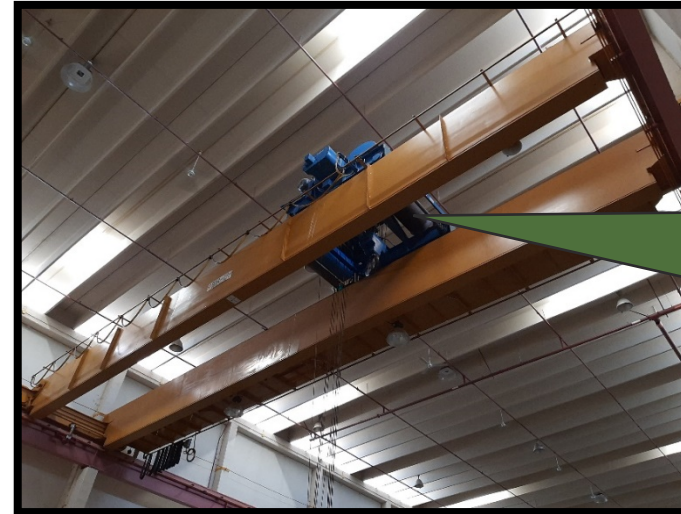


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Machine Shop Overhead Crane Improvements

- 50/15-Ton overhead crane - issues with wire rope, abrupt start/stop movements, single trolley
- Conduct detailed inspection of components
- Add second 15-Ton trolley, new wire rope, variable frequency drives for smooth lifting/lowering adjustments

Cost (in \$000s)			
Total	Pre-2022	2022	2023
\$294	\$265	\$29	\$ -



Existing 50-Ton/15-Ton Trolley

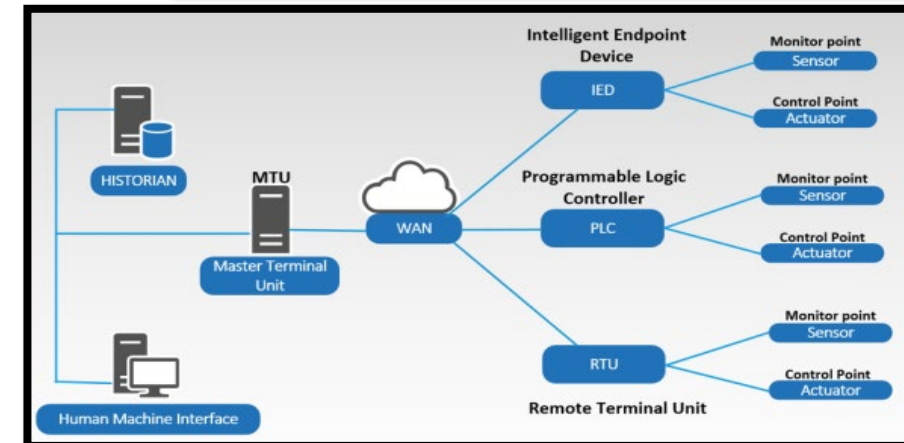


SCADA Replacement at Headquarters Control Center

- Primary system enabling canal operation from control center - “visualizes” operational data from field devices and adjusts equipment throughout CAP system
- Existing hardware and software at end of life and at risk
- New standards, network configuration, hardware, databases, security, and control system design
- Phased strategy – hold points for successful testing



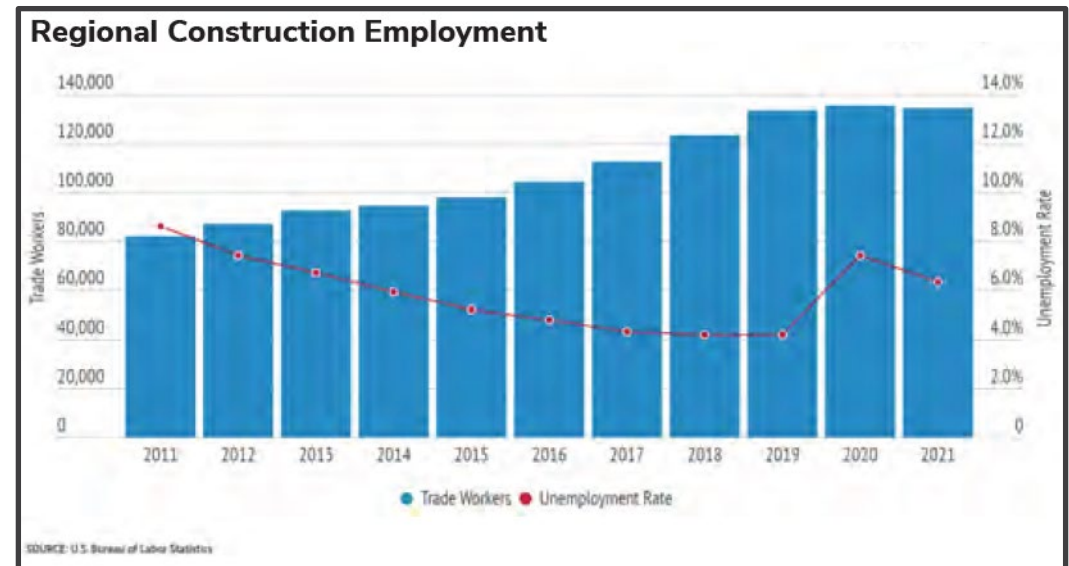
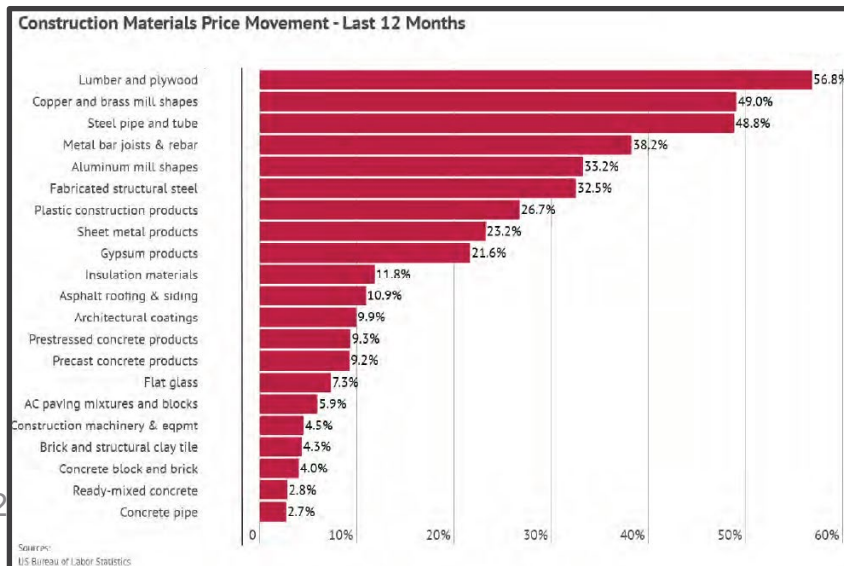
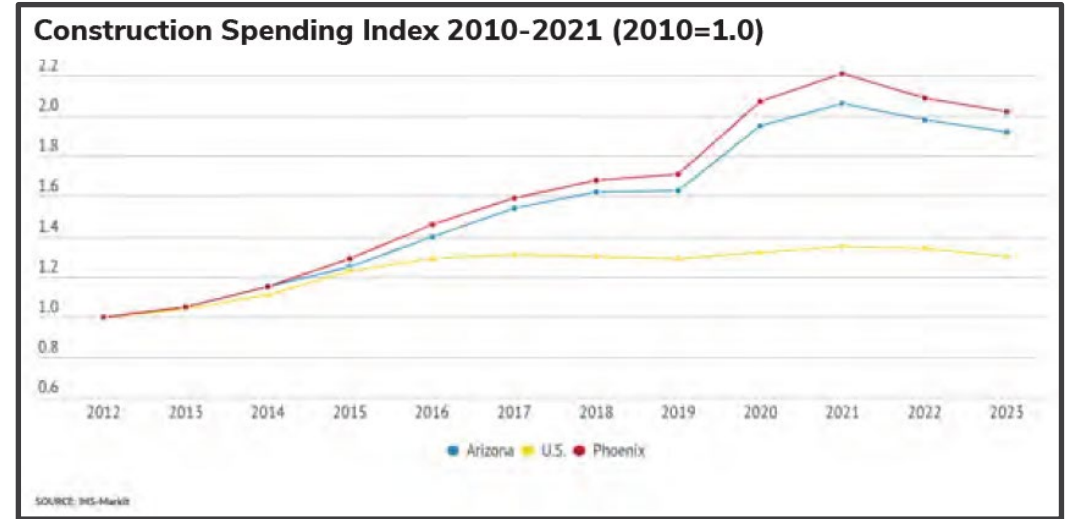
Cost (in \$000s)							
Total	Pre-2022	2022	2023	2024	2025	2026	2027
\$19,215	\$753	\$2,142	\$4,609	\$7,640	\$3,986	\$85	\$ -



Ongoing Construction Market Conditions

Managing Changes within Construction Market

- Contractor availability
- Labor trends
- Material availability and supply chain
- Pricing and schedule adjustments



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Other Funds and Accounts

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CAGRD Account

(Thousands)	2019 Actual	2020 Actual	2021 Projection	2022 Budget	2023 Budget
Operating Revenues					
Reimbursements & other operating revenues	\$ 44,716	\$ 43,893	\$ 63,873	\$ 55,125	\$ 61,803
Operating Expense					
Salaries and related costs	(1,034)	(1,089)	(1,117)	(1,327)	(1,389)
Depreciation	(61)	(61)	(61)	(61)	(61)
Outside services	(209)	(2,843)	(450)	(683)	(763)
Overhead	(1,041)	(1,121)	(1,165)	(1,440)	(1,507)
Water for recharge	(13,248)	(12,061)	(11,623)	(13,179)	(14,827)
Other expenses	(18)	(11)	(15,871)	(55)	(55)
Total operating expenses	(15,611)	(17,186)	(30,287)	(16,745)	(18,602)
Operating Income	29,105	26,707	33,586	38,380	43,201
Non-Operating Revenues/Expenses					
Interest Income	1,152	560	1,573	259	793
Interest Expense	(352)	(453)	(8,114)	(913)	(649)
Total non-operating revenue/expenses	800	107	(6,541)	(654)	144
Change in Net Position	\$ 29,905	\$ 26,814	\$ 27,045	\$ 37,726	\$ 43,345
Obligations (year pumped)-000 acre-feet	32.2	29.8	33.1	34.3	34.3

Captive Insurance Fund

(Thousands)	2019 Actual	2020 Actual	2021 Projection	2022 Budget	2023 Budget
Operating Revenues					
Reimbursements and other operating revenues	\$ 9,666	\$ 10,549	\$ 11,042	\$ 11,706	\$ 12,702
Operating Expense					
Outside Services	(254)	(229)	(228)	(229)	(268)
Other Expense	(7,862)	(8,434)	(9,560)	(10,805)	(11,478)
Total Operating Expense	(8,116)	(8,663)	(9,788)	(11,034)	(11,746)
Operating Income	1,550	1,886	1,254	672	956
Non-Operating Revenues					
Interest Income	16	29	29	32	35
Change in Net Position	\$ 1,566	\$ 1,915	\$ 1,283	\$ 704	\$ 991

Supplemental Water Account

<i>(Thousands)</i>	2019 Actual	2020 Actual	2021 Projection	2022 Budget	2023 Budget
Operating Revenues/Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
Non-Operating Revenues					
Interest Income	308	297	(2)	132	133
Change in Net Position	\$ 308	\$ 297	\$ (2)	\$ 132	\$ 133

Questions