



YOUR WATER. YOUR FUTURE.

Central Arizona Project Preliminary 2019 – 2024 Rates

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Agenda

1. Overview and Key Assumptions
2. Water Delivery Preliminary Rates
 - a. Base Case
 - b. Alternative Case
 - c. Proposed Rate Stabilization Discussion
3. Capital Charges
4. Underground Storage Rates
5. CAGR Preliminary Rates

General Fund Sources and Uses of Revenue

Even years

- *Long-range financial plan*
- *Set water rates*
- *Strategic plan*
- *Reserve strategy review*
- *Budget update (if required)*

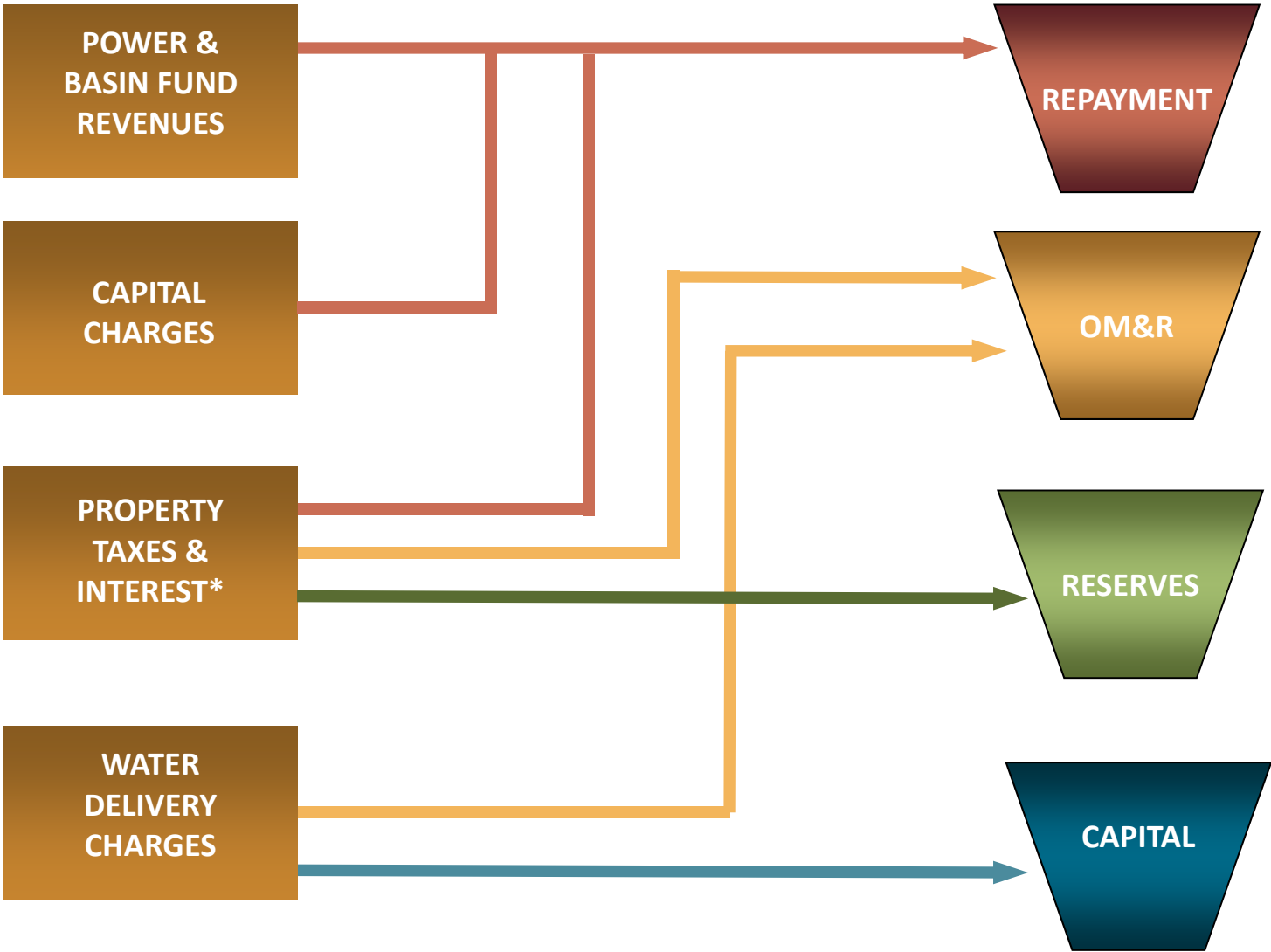
Odd years

- *2-year Budget and Business Plan (e.g. 2020-2021)*
- *Water rate update (if required)*

Every year

- *Quarterly financial reviews*
- *Set tax rates*

General Fund Sources and Uses of Revenue



Key Assumptions

Two Cases:

- ✓ Base Case: DCP Tier 0 in 2020; T1 in 2021-2022; T2a in 2023-2024
- ✓ Alternative Case: DCP Tier 1 in 2020-2022 and Tier 2a in 2023-2024

Water rates are set to recover costs, net of other revenue

Tax decisions can impact rates

- ✓ General ad valorem property tax rate held at 10¢
 - 4½¢ applied towards Ag programs, 1¢ for DCP Ag Recovery Infrastructure, 1¢ toward recovery programs and 3½¢ applied to repayment to lower capital charges
 - Lower capital charges \$20/acre-foot for 2020 and \$8/acre-foot for 2021 (from 2019/2020 taxes); provides for offset in 2021 repayment increase
- ✓ Water storage tax held at 4¢ for federal repayment and CAWCD OM&R costs
 - Make 4¢ available for water bank needs

Key Assumptions

Power

- ✓ New power agreements in place starting in 2020 forward
- ✓ 50% for 2020 under contract. Rates increase due to current market outlook.

Transmission

- ✓ Based on basic characteristics, variable costs are included in energy & fixed costs are included in O&M

Non-Indian Ag

- ✓ NIA reallocation occurs in 2021 for 2022 deliveries
- ✓ First payment in 2021 ~\$13.6 million/year for 5 years for capital charges and interest

Wheeling

- ✓ Starts in 2021 at 700 acre-foot/year and remains at that level
- ✓ Included in rate calculations

Rate Stabilization

- ✓ Proposed utilization of rate stabilization reserves (for discussion)

Ag Programs

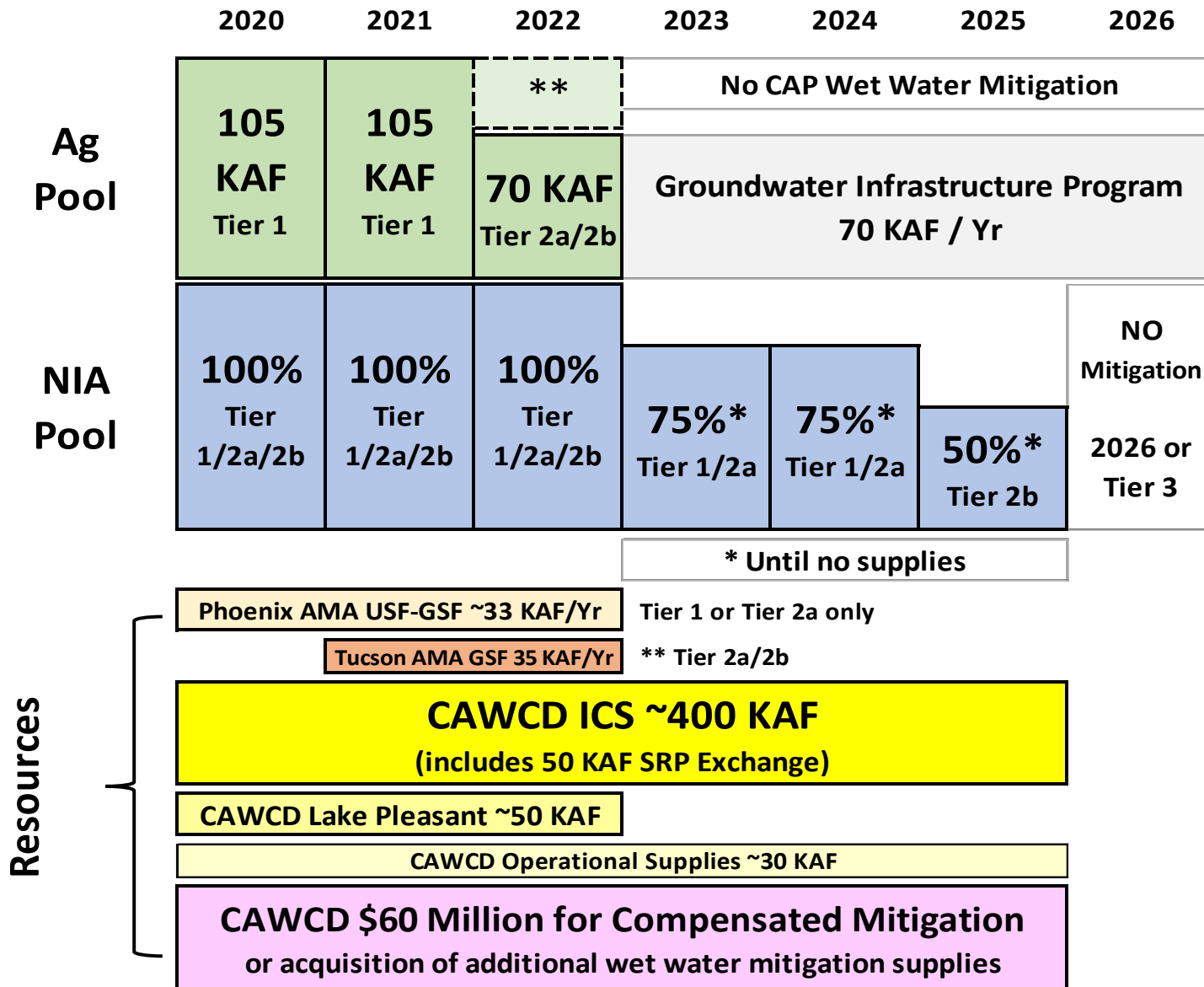
- ✓ Ag Consideration is contractual agreement to cover Fixed OM&R for Ag Settlement Pool
- ✓ Ag deliveries are in accordance with Arizona Implementation Plan
- ✓ No Ag incentives are proposed in the preliminary rates
- ✓ Preliminary rates are exclusive of any Ag Forbearance program credits

Mitigation Component- Key Terms

- 2020 – 2022
 - 100% mitigation for NIA Pool (annual determination of vol.)
 - Fixed volume for CAP AG, dependent on annual tier determination
- 2023 – 2025
 - No CAP Ag Mitigation (except USF to GSF and groundwater infrastructure)
 - M&I and Indian priority fully mitigated first
 - NIA volume based on actual orders/operating conditions
 - NIA 75% under T1 and T2a (until no supplies)
 - NIA 50% under T2b (until no supplies)
- 2026
 - Zero mitigation
- No mitigation for any water user in T3 or 2026, whichever occurs first

*Excerpt from Nov 29, 2018 and Jan 8, 2019
Steering Committee Meetings*

AZ LBDCP Mitigation Program Summary



AZ LBDCP Mitigation Update

- What if hydrology improves in 2020 or 2021?
 - I.e., no Tier 1 or Tier 2 shortage
 - There will be a “Tier 0” shortage so long as Lake Mead is between 1,090 and 1,075 feet
- “No Shortage – No Mitigation” (1,075 and above)
- The overall shape & timing of the mitigation program remains the same
 - Mitigation program does not move out in time
- Resources remain available for the duration of the mitigation program
 - Unused resources in earlier years provide greater likelihood that resources are sufficient to provide all scheduled mitigation, but...
 - Unused resources in earlier years do not increase the amount or term of mitigation in subsequent year

Base Case: Water Volumes

(KAF) DCP Tier	2019	2020 T0	2021 T1	2022 T1	2023 T2a	2024 T2a
Delivery Supply	1,595	1,625	1,615	1,595	1,595	1,595
Shortage Reduction	(111)	(192)	(512)	(512)	(592)	(592)
Subtotal	1,484	1,433	1,103	1,083	1,003	1,003
Tribal ICS	(134)	(40)	(40)	0	0	0
CAP Mitigation (Lake Pleasant & ICS)	0	0	96	128	100	100
CAGR credit transfers/Take or Pay/Wheeling	31	5	13	6	1	1
Billed Water Volumes	1,381	1,398	1,172	1,217	1,104	1,104

Alternative Case: Water Volumes

(KAF) DCP Tier	2019	2020 T1	2021 T1	2022 T1	2023 T2a	2024 T2a
Delivery Supply	1,595	1,619	1,620	1,595	1,595	1,595
Shortage Reduction	(111)	(512)	(512)	(512)	(592)	(592)
Subtotal	1,484	1,107	1,108	1,083	1,003	1,003
Tribal ICS	(134)	(40)	(40)	0	0	0
CAP Mitigation (Lake Pleasant & ICS)	0	91	93	127	99	70
CAGR credit transfers/Take or Pay/Wheeling	31	10	11	5	0	1
Billed Water Volumes	1,381	1,168	1,172	1,215	1,102	1,074

Base Case: Prelim 2019-2024 Rate Components

Units = \$/acre-foot	Historic 2018	Firm 2019	Firm 2020	2021	Advisory		
					2022	2023	2024
Capital Charges							
(A) M&I–Long Term Subcontract	\$45	\$41	\$48	\$66	\$71	\$68	\$70
Delivery Charges							
Fixed O&M	\$67	\$72	\$74	\$100	\$108	\$118	\$124
Big “R”	\$27	\$24	\$24	\$30	\$29	\$34	\$35
Fixed OM&R Rate Stabilization	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
(B) Fixed OM&R	\$95	\$96	\$99	\$130	\$137	\$152	\$159
(C) Pumping Energy Rate	\$65	\$62	\$56	\$57	\$57	\$59	\$61
(D) Property Tax Equivalency	\$49	\$54	TBD	TBD	TBD	TBD	TBD
(E) Proposed Rate Stabilization			-	(\$15)	(\$6)	(\$4)	-

Base Case: Prelimin 2019-2024 Rate Schedule

Units = \$/acre-foot The Letter Designations in the Formulas Refer to the Rate Components above	2018	Firm 2019	Firm 2020	Advisory			
				2021	2022	2023	2024
M&I Subcontract (B + C)	\$160	\$158	\$155	\$187	\$194	\$211	\$220
Federal Contract (B + C)	\$160	\$158	\$155	\$187	\$194	\$211	\$220
Ag Settlement Pool (C)	\$65	\$62	\$56	\$57	\$57	\$59	\$61
Excess (A + B + C)	\$205	\$199	\$203	\$253	\$265	\$279	\$290
Interstate (A + B + C + D)	\$254	\$253	TBD	TBD	TBD	TBD	TBD
M&I Subcontract & Federal Contract with Rate Stabilization (B + C + E)	\$160	\$158	\$155	\$172	\$188	\$207	\$220

Alternative Case: Prelim 2019-2024 Rate Components

Units = \$/acre-foot	Historic	Firm	Firm	Advisory			
	2018	2019	2020	2021	2022	2023	2024
Capital Charges							
(A) M&I – Long Term Subcontract	\$45	\$41	\$48	\$66	\$71	\$68	\$70
Delivery Charges							
Fixed O&M	\$67	\$72	\$98	\$101	\$109	\$119	\$124
Big “R”	\$27	\$24	\$30	\$30	\$29	\$34	\$35
Fixed OM&R Rate Stabilization	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
(B) Fixed OM&R	\$95	\$96	\$128	\$131	\$138	\$153	\$160
(C) Pumping Energy Rate	\$65	\$62	\$58	\$57	\$57	\$59	\$61
(D) Property Tax Equivalency	\$49	\$54	TBD	TBD	TBD	TBD	TBD
(E) Proposed Rate Stabilization	0	0	(\$18)	(\$7)	0	0	0

Alternative Case: Prelim 2019-2024 Rate Schedule

Units = \$/acre-foot The Letter Designations in the Formulas Refer to the Rate Components above	2018	Firm 2019	Firm 2020	Advisory			
				2021	2022	2023	2024
M&I Subcontract (B + C)	\$160	\$158	\$186	\$188	\$195	\$212	\$221
Federal Contract (B + C)	\$160	\$158	\$186	\$188	\$195	\$212	\$221
Ag Settlement Pool (C)	\$65	\$62	\$58	\$57	\$57	\$59	\$61
Excess (A + B + C)	\$205	\$199	\$234	\$254	\$266	\$280	\$291
Interstate (A + B + C + D)	\$254	\$253	TBD	TBD	TBD	TBD	TBD
M&I Subcontract & Federal Contract with Rate Stabilization (B + C + E)	\$160	\$158	\$168	\$181	\$195	\$212	\$221

Capital Charges

- ✓ Capital charges are paid on M&I allocations, regardless of water delivery
- ✓ Capital charges are charged on all excess deliveries.
- ✓ Not paid by federal and Ag Settlement Pool
- ✓ Must be used toward federal debt repayment
 - Basin Development Fund net revenues are applied toward repayment first (surplus power sales, land sales, etc.)
 - Balance must be made up as a cash payment (makeup payment)
 - Capital charges are utilized for makeup payment
 - Any shortfall in makeup payment from capital charges are covered by taxes
- ✓ Unless indicated otherwise, capital charges are published at full amount to cover make-up payment for the federal repayment
 - Annual discussions of how much, if any, taxes will be utilized for repayment to subsequently reduce capital charges

Capital Charges

\$/acre-foot	Historic	Firm	Firm	Advisory			
	2018	2019	2020	2021	2022	2023	2024
Capital Charges	\$45	\$41	\$48	\$66	\$71	\$68	\$70

- ✓ Federal repayment increase of \$6+ million in 2021
- ✓ Taxes have been proposed to be utilized for repayment for 2020 to reduce the recommended published capital charges by \$20/acre-foot
- ✓ Taxes have been proposed to be utilized for repayment for 2021 from 2019/2020 taxes to reduce the recommended published capital charges by \$8/acre-foot to address increase in federal repayment
- ✓ 2022-2024 capital charges are set to make-up the cash payment on the federal repayment

Underground Water Storage O&M Rates

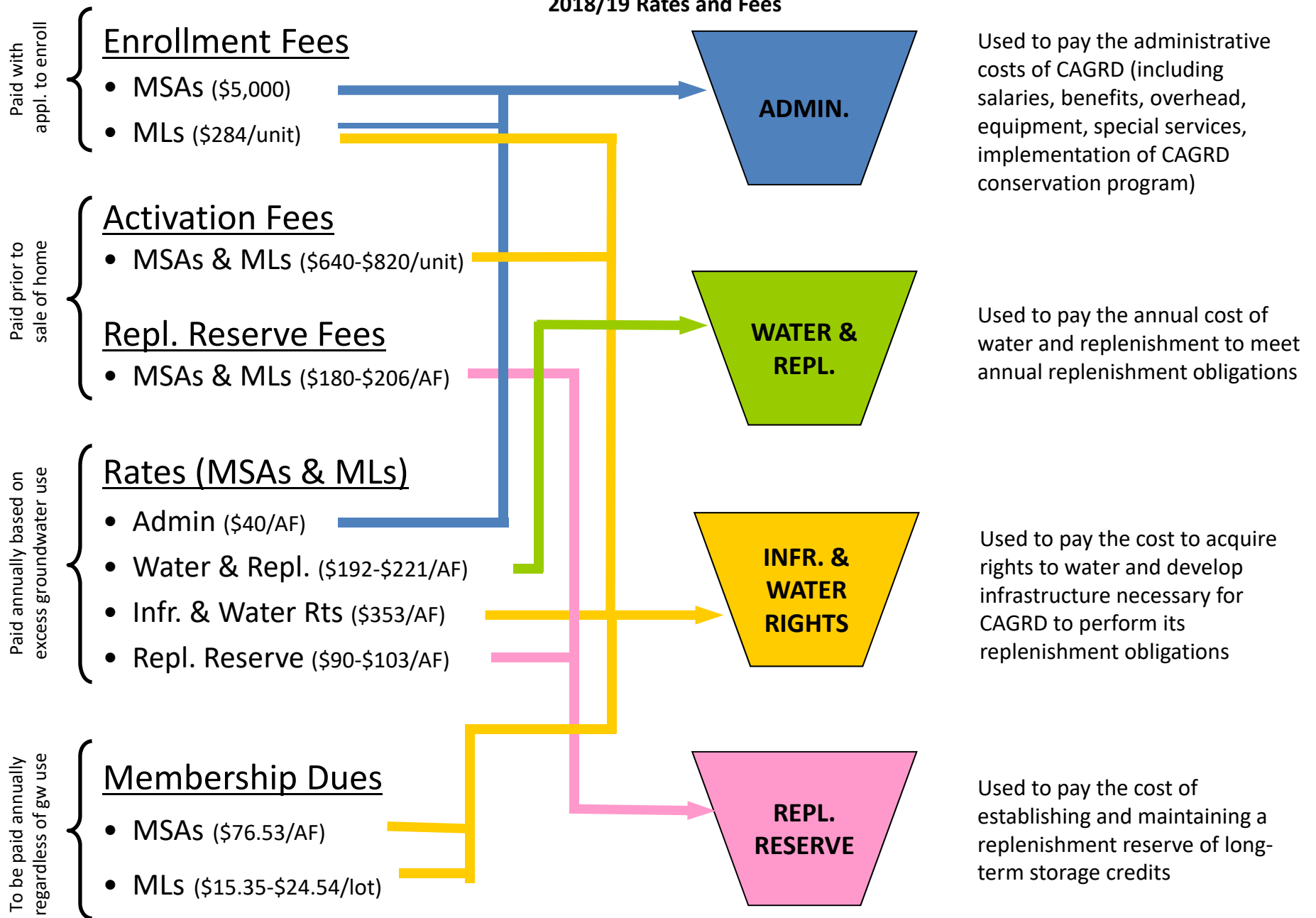
\$/acre-foot	Historic	Firm	Firm	Advisory			
	2018	2019	2020	2021	2022	2023	2024
Phoenix AMA	\$13	\$13	\$13	\$13	\$14	\$14	\$15
Tucson AMA	\$15	\$15	\$15	\$15	\$15	\$15	\$15

✓ No change from Provisional rates

**Preliminary
CAGR Assessment
Rate Schedule
2019/20 thru 2023/24**

CAGR Revenue Streams

2018/19 Rates and Fees



MSA = Member Service Area ML = Member Land

CAGRD Changes for 2019

- ✓ Biennial Rate Setting (2018 comprehensive rate setting year)
- ✓ 2019 Off year for rate setting; Normally no changes to rates
- ✓ Changes impacting CAGRD for 2019
 - Review of 2020-21 to 2023-24 Activation Fees
 - Impact of Drought Contingency Plan (DCP) & Colorado River Shortage
 - Impact of CAGRD/GRIC/GRWS Agreements
 - Impact of changes in CAP's Capital Charges
 - Impact of changing energy market conditions

CAGR D Activation Fee Changes for 2020/21 – 2023/24

- ✓ Board in 2013 approved Activation Fee Schedule for 2014/15 - 2019/20
- ✓ Staff committed to review & discuss 2020/21 - 2023/24 Activation Fee Schedule by Spring of 2019.
 - Staff discussed proposed Activation Fees with homebuilder representatives on 2-27-19
 - Staff presented proposed Activation Fees at the CAGR D & Underground Storage Committee on 3-21-19

Key Activation Fee Concepts

- ✓ CAGR historical acquisition cost form the basis of the Activation Fee
- ✓ Inter-period Equity: Newly activating members pay an Activation Fee at least equal the costs of CAGR water acquisitions paid by existing members, and “catch up” with members who have already activated and paid for water rights acquisition.
- ✓ Collect upfront water acquisition costs through upfront Activation Fees as opposed to I&WR rates

2019 Updated CAGR Historical Costs for Determining Activation Fee Target

Updated CAGR Activation Fee Target

	<u>Acre-feet</u>	<u>\$/af</u>	<u>(\$000)</u>
CAP M&I Allocations	8,311	\$448	\$3,727
NIA (@ 40% availability) 1/	7,274	\$4,955	\$36,043
WMAT (@ 40% availability) 2/	1,000	\$6,314	\$6,314
Liberty	<u>5,000</u>	\$1,223	<u>\$6,113</u>
Total	21,585	\$2,418	\$52,197
Unit Cost (from above)		\$2,418	
I&WR rate for 3 years		<u>\$1,059</u>	
Activation Fee Target (\$/af)		\$3,477	
Activation Fee Target Rounded (\$/af)		\$3,500	

1/ 18,185 af X .4 = 7,274 af

2/ 2,500 af X .4 = 1,000 af

Recommended Activation Fee Schedule

Activation Fee Basis
\$3,500/acre-foot

	Phoenix AMA	Pinal AMA Pre-	Pinal AMA Post-	Tucson AMA
Acre-feet/unit	0.4	Min*	0.4	0.3
Activation Fee target	\$1,400	Min*	\$1,400	\$1,050

Phoenix AMA	Pinal AMA Pre-2007	Pinal AMA	Tucson AMA
0.4	Min*	0.4	0.3
\$1,400	Min*	\$1,400	\$1,050

		Activation Fee Schedule (\$/unit)				Percent Change (%)			
Previously Approved Fee Schedule	2013/14	196	196	196	196	n.a	n.a	n.a	n.a
	2014/15	260	235	260	250	33%	20%	33%	28%
	2015/16	350	282	350	320	35%	20%	35%	28%
	2016/17	460	282	460	400	31%	0%	31%	25%
	2017/18	610	282	610	510	33%	0%	33%	28%
	2018/19	820	282	820	640	34%	0%	34%	25%
	2019/20	1,080	282	1,080	810	32%	0%	32%	27%
Recommended Fee Schedule	2020/21	1,180	302	1,180	880	9%	7%	9%	9%
	2021/22	1,290	323	1,290	960	9%	7%	9%	9%
	2022/23	1,400	345	1,400	1,050	9%	7%	9%	9%
	2023/24	1,520	370	1,520	1,140	9%	7%	9%	9%

* The minimum Activation Fee is for pre-2007 Pinal AMA and pre-tipping point MSAs

Changes & Resulting Impacts on 2020/21 – 2023/24 Assessment Rate Schedule

- ✓ Based on prior meetings the 2020/2021 – 2023/24 Activation Fees increase at 9%/yr & Enrollment Fees and minimum Activation Fees increase at 7%/yr
- ✓ Water Shortages & DCP increase CAP's Fixed OM&R rate and correspondingly CAGR's Water Replenishment & Replenishment Reserve rates (replenishment rates).
- ✓ CAGR/GRIC/GRWS Agreements increases Phoenix AMA and to a smaller extent Tucson AMA replenishment rates.
- ✓ Lower 2020-2021 CAP Capital Charges lower CAGR's 2019/20 – 2020/21 replenishment rates.
- ✓ Higher CAP energy rates increase CAGR replenishment rates in all AMAs

Assumptions: 2019/20 – 2023/24 Assessment Rate Schedule

- ✓ Water shortage starts in 2021 (T1) followed by 2022 (T1), 2023 (T2a), and 2024 (T2a).
- ✓ No excess water is available starting in 2020; No contract replenishment for 2020 forward.
- ✓ Published Assessment Rate Schedule **excludes** application of CAP rate stabilization funds.
- ✓ Published Assessment Rate Schedule for Illustration purposes **includes** staff's proposed application of CAP rate stabilization funds.

CAGR Rates (Excludes Application of Rate Stabilization Funds)

	<u>2017/18</u>	<u>Firm</u> <u>2018/19</u>	<u>Firm</u> <u>2019/20</u>	<u>2020/21</u>	<u>Advisory</u>		
					<u>2021/22</u>	<u>2022/23</u>	<u>2023/24</u>
<u>Phoenix Active Management Area</u>							
Water & Replenishment Component	\$ 214	\$ 192	\$ 235	\$ 323	\$ 334	\$ 339	\$ 344
Administrative Component	36	40	41	41	37	33	30
Infrastructure & Water Rights Component	353	353	353	353	353	353	353
Replenishment Reserve Charge	101	90	92	114	145	170	178
Total Assessment Rate (\$/AF)	\$ 704	\$ 675	\$ 721	\$ 831	\$ 869	\$ 895	\$ 905
<u>Pinal Active Management Area</u>							
Water & Replenishment Component	\$ 204	\$ 204	\$ 203	\$ 253	\$ 265	\$ 280	\$ 290
Administrative Component	36	40	41	41	37	33	30
Infrastructure & Water Rights Component	353	353	353	353	353	353	353
Replenishment Reserve Charge	108	97	99	123	129	136	141
Total Assessment Rate (\$/AF)	\$ 701	\$ 694	\$ 696	\$ 770	\$ 784	\$ 802	\$ 814
<u>Tucson Active Management Area</u>							
Water & Replenishment Component	\$ 238	\$ 221	\$ 242	\$ 267	\$ 276	\$ 282	\$ 286
Administrative Component	36	40	41	41	37	33	30
Infrastructure & Water Rights Component	353	353	353	353	353	353	353
Replenishment Reserve Charge	131	103	102	103	103	105	106
Total Assessment Rate (\$/AF)	\$ 758	\$ 717	\$ 738	\$ 764	\$ 769	\$ 773	\$ 775

CAGR Rates (Includes Staff Proposed Application of Rate Stabilization Funds)

For Illustration & Planning	Firm		Advisory				
	<u>2017/18</u>	<u>2018/19</u>	<u>2019/20</u>	<u>2020/21</u>	<u>2021/22</u>	<u>2022/23</u>	<u>2023/24</u>
<u>Phoenix Active Management Area</u>							
Water & Replenishment Component	\$ 214	\$ 192	\$ 235	\$ 308	\$ 328	\$ 334	\$ 344
Administrative Component	36	40	41	41	37	33	30
Infrastructure & Water Rights Component	353	353	353	353	353	353	353
Replenishment Reserve Charge	101	90	92	107	142	168	178
Total Assessment Rate (\$/AF)	\$ 704	\$ 675	\$ 721	\$ 809	\$ 860	\$ 888	\$ 905
<u>Pinal Active Management Area</u>							
Water & Replenishment Component	\$ 204	\$ 204	\$ 203	\$ 238	\$ 259	\$ 275	\$ 290
Administrative Component	36	40	41	41	37	33	30
Infrastructure & Water Rights Component	353	353	353	353	353	353	353
Replenishment Reserve Charge	108	97	99	116	126	134	141
Total Assessment Rate (\$/AF)	\$ 701	\$ 694	\$ 696	\$ 748	\$ 775	\$ 795	\$ 814
<u>Tucson Active Management Area</u>							
Water & Replenishment Component	\$ 238	\$ 221	\$ 242	\$ 261	\$ 273	\$ 279	\$ 285
Administrative Component	36	40	41	41	37	33	30
Infrastructure & Water Rights Component	353	353	353	353	353	353	353
Replenishment Reserve Charge	131	103	102	102	103	104	106
Total Assessment Rate (\$/AF)	\$ 758	\$ 717	\$ 738	\$ 757	\$ 766	\$ 769	\$ 774

CAGR Rates (cont'd)

	<u>2017/18</u>	<u>Firm</u> <u>2018/19</u>	<u>Firm</u> <u>2019/20</u>	<u>Advisory</u> <u>2020/21</u>	<u>2021/22</u>	<u>2022/23</u>	<u>2023/24</u>
<u>Contract Replenishment Tax - Scottsdale</u>							
Cost of Water	\$ 195	\$ 205	\$ 199	n.a.	n.a.	n.a.	n.a.
Cost of Transportation	0	0	0	n.a.	n.a.	n.a.	n.a.
Cost of Replenishment	0	0	0	n.a.	n.a.	n.a.	n.a.
Administrative Component	36	40	41	n.a.	n.a.	n.a.	n.a.
Total Tax Rate (\$/AF)	\$ 231	\$ 245	\$ 240	n.a.	n.a.	n.a.	n.a.
<u>Fees (\$/Lot)</u>							
Enrollment Fee - Commercial Subdivisions	\$ 700	\$ 924	\$ 1,094	\$ 1,184	\$ 1,285	\$ 1,397	\$ 1,512
Enrollment Fee	\$ 284	\$ 284	\$ 284	\$ 304	\$ 325	\$ 347	\$ 372
Activation Fee - Minimum	\$ 282	\$ 282	\$ 282	\$ 302	\$ 323	\$ 345	\$ 370
Activation Fee - Phoenix AMA	\$ 610	\$ 820	\$ 1,080	\$ 1,180	\$ 1,290	\$ 1,400	\$ 1,520
Activation Fee - Pinal Post-2007	\$ 610	\$ 820	\$ 1,080	\$ 1,180	\$ 1,290	\$ 1,400	\$ 1,520
Activation Fee - Tucson AMA	\$ 510	\$ 640	\$ 810	\$ 880	\$ 960	\$ 1,050	\$ 1,140
<u>Annual Membership Dues</u>							
ML - Phoenix AMA (\$/Lot)	\$ 22.63	\$ 23.52	\$ 28.59	\$ 35.74	\$ 37.09	\$ 37.43	\$ 29.39
ML - Pinal Active Management Area (\$/Lot)	\$ 14.88	\$ 15.35	\$ 19.36	\$ 25.20	\$ 27.04	\$ 28.16	\$ 22.63
ML - Tucson Active Management Area (\$/Lot)	\$ 23.58	\$ 24.54	\$ 31.04	\$ 39.29	\$ 41.30	\$ 42.16	\$ 33.42
MSA (\$/AF)	\$ 74.44	\$ 76.53	\$ 97.22	\$ 128.79	\$ 140.67	\$ 149.06	\$ 121.57



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CENTRAL ARIZONA PROJECT

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Questions?