



**Fiscal Year 2020
Strategic Plan, Annual Operating Plan, and
Multi-Year Capital Improvement Plan**

**Board of Directors Workshop
July 29, 2019**



Strategic Plan

***Presented by
Jim Forte'
Planning & Development Manager***



Strategic Plan

Meeting the Needs of the Brazos Basin

The Strategic Plan of the Brazos River Authority

Mission Statement

The Brazos River Authority (BRA) exists to develop, manage, and protect the water resources of the Brazos River basin.

Guiding Principles

Quality People – The right people for the right job

Integrity and Respect

Commitment to Service and Stewardship

Innovation and Continuous Improvement



Goals, Objectives and Strategies

- I. The BRA will develop water resources, including both surface and groundwater.
 - a. Support the development of surface water projects based on economic feasibility, environmental sensitivity and customer needs
 - 1. System Operation Permit
 - 2. Allens Creek Reservoir
 - ~~3. Lake Aquilla Re-allocation Assessment (Pool Rise)~~
 - 3. United States Army Corps of Engineers (USACE) Reservoir Re-allocation Assessment Projects
 - 4. Additional surface water opportunities
 - b. Develop groundwater responsibly and efficiently
 - 1. Trinity Wells
 - 2. Brazos Alluvium Research
 - 3. Monitor groundwater regulation, development, and opportunities
 - 4. Participate in groundwater/surface water interface studies



Goals, Objectives and Strategies

- c. Support reuse and conjunctive use to increase benefit of existing water resources
 - 1. System Operation Permit
 - 2. East Williamson County Regional Water System
 - ~~3. Lake Somerville Augmentation~~
 - 3. Bell County Water Conservation and Improvement District #1 Reuse Project at Stillhouse Hollow
 - 4. Other reuse and conjunctive use opportunities
- d. Support the development of economically feasible alternative water sources, such as Aquifer Storage and Recovery (ASR), and seawater and brackish groundwater desalination treatment technology
 - 1. Williamson County Aquifer Storage and Recovery
 - 2. Bell County Aquifer Storage and Recovery



Goals, Objectives and Strategies

- e. Research and develop infrastructure for the conveyance/transportation of water from areas of surplus to areas of need

1. Williamson County Regional Raw Water Line
2. Lake Belton-Stillhouse Hollow Pipeline
- ~~3. Lake Somerville Augmentation~~
4. Integrated Water Resources Planning

- II. The BRA will manage water resources as a service to BRA customers and to support beneficial use by citizens of the Brazos River basin.

- a. Manage water resources as a system

1. System Operation Permit and Water Management Plan
- ~~2. Supply downstream contracts from multiple reservoirs~~
2. Possum Kingdom-Granbury Water Management
3. East Williamson County Regional Water System

Goals, Objectives and Strategies

- b. Operate and maintain the BRA water supplies and associated infrastructure in a safe, responsible manner in compliance with water right permits, water supply contracts, and other applicable regulatory requirements
 - 1. ~~Reservoir asset management and~~ Long-term preventive maintenance of BRA Dams **and Reservoir Facilities**
 - i. Possum Kingdom Lake
 - ii. Lake Limestone
 - iii. Lake Granbury
 - 2. ~~Manage floodwater releases from BRA reservoirs~~ **Develop Risk-Based Asset Capital Management Program**
 - 3. Manage floodwater releases from BRA reservoirs
 - 4. Williamson County Regional Raw Water Line
 - 5. Brazos Watermaster Program
 - 6. Emergency Action Plans

Goals, Objectives and Strategies

- c. **Protect water supply and treatment facilities and proactively plan for continuous improvement of security measures**
 - 1. **American Water Infrastructure Act of 2018 All-Hazards and Emergency Response Plan Development for use by customers in the water supply component of local plans**
 - 2. **Update site security analyses for all facilities and incorporate information into future capital improvements**
 - 3. **Advance physical and cyber security measures**
- d. **Encourage water conservation strategies to address projected water shortages in the basin**
 - 1. **Support efforts to accomplish water conservation goals within the Regional and State Water Plans**
 - 2. **Assist in achievement of water conservation goals**



Goals, Objectives and Strategies

- e. Manage water and wastewater treatment operations in support of water supply needs
 - 1. East Williamson County Regional Water Supply System
 - 2. ~~Brushy Creek WWTP Operations~~ Sandy Creek WTP Operations
 - 3. Hutto WWTP Operations
 - 4. Clute/Richwood WWTP Operations
 - 5. Sugar Land WWTP Operations
 - 6. Temple/Belton WWTP Operations
 - 7. ~~Sandy Creek WTP Operations~~
 - 7. Doshier Farm WWTP Operations
- f. Explore new water and wastewater treatment plant opportunities



Goals, Objectives and Strategies

III. The BRA will protect water resources, and where possible improve water quality and habitat, to support responsible and efficient use of the Brazos River basin's natural resources.

~~a. Evaluate and Monitor~~ and assess water quality throughout the basin for compliance with applicable regulatory requirements

1. Clean Rivers Program and Water Quality Initiatives

2. Environmental Flow Standards

3. Support water supply development

4. Participate in State sponsored advisory groups related to water quality standards development and revision, water quality monitoring protocol development, and development of the Texas Integrated Report of Surface Water Quality



Goals, Objectives and Strategies

b. Monitor and assess stream and reservoir biology and morphology to determine the effectiveness of instream flows **and other programs** in maintaining healthy riparian areas and aquatic life conditions

1. Baseline instream flow monitoring and assessment to inform on SB3 environmental flow standards

2. ~~Fresh Water Mussel Rapid Risk Assessment~~ **Candidate-listed aquatic species population and recruitment assessments**

3. Reservoir Habitat Improvement Program

4. Participate with state and federal agencies on issues related to Threatened and Endangered Species **and/or** Invasive Species

i. **Freshwater Mussel Candidate Conservation Agreements with Assurances (CCAA) Implementation**

ii. Brazos Water Snake Study

iii. Texas Parks and Wildlife Invasive Species Interlocal Agreement

Goals, Objectives and Strategies

c. Provide for environmental flows through reservoir operations and participate in state-wide instream flow initiatives

1. Participate in state-sponsored advisory groups related to environmental flow standard development and revision
2. Donation of long-term firm water to Texas Water Trust

d. Participate in local watershed protection management efforts

- ~~1. Navasota Watershed Protection Plan being conducted by the Texas Water Resources Institute Bureau of Land Management Joint Environmental Impact Statement (EIS)/Resource Management Plan (RMP) for Texas~~
2. Lake Limestone Downstream Riparian Restoration
3. Develop Texas Pollutant Discharge Elimination System (TPDES) permit application review protocols to identify applications that potentially pose a potential threat to the water quality of drinking water sources

Goals, Objectives and Strategies

- e. Support development of new water supplies through environmental impact studies
 - 1. Allens Creek 404 Permit
 - 2. Lake Belton-Stillhouse Hollow Pipeline
- f. Manage BRA-owned properties and administer rules and regulations relative to ~~state-delegated~~ State and federal programs for the protection of water resources, aquatic life, and overall water quality
 - 1. Possum Kingdom Natural Resource Inventory
 - 2. United States Fish and Wildlife Service (USFWS) Section 10 permitting
 - 3. Aquatic Resource Relocation Plans
- g. Identify conservation/restoration opportunities on BRA property and at key locations across the basin where such activities would contribute to the protection of drinking water supplies, improve water quality conditions, contribute to the preservation of aquatic habitat of sensitive species, and/or provide mitigation opportunities for BRA projects



Goals, Objectives and Strategies

- IV. The BRA will proactively engage in strategic planning and effective resource management.
 - a. Support the development of strategies to meet the needs of the Water Supply System with a sensitivity to the System Water Rate
 - 1. Involvement in State Water Planning Process
 - ~~2. Internal Water Management Strategy Analyses Integrated Water Resources Plan~~
 - 3. Long Range Financial Plan
 - ~~4. Strategic Plan~~
 - ~~5. Review and Adoption of Strategic Plan BRA Properties Master Plan~~
 - b. Support the development of strategies that improve assessment of operational efficiency and physical condition of assets and that improve capital renewal of assets
 - 1. Improve electronic data management platform options for collection and evaluation of physical condition, operating performance and environmental data
 - 2. Develop a risk-based asset management framework for planning of capital renewal and rehabilitation

Goals, Objectives and Strategies

V. The BRA will establish communications and public relations to support the BRA's mission and service to the Brazos River basin communities.

~~a. Be proactive in providing public information~~ **Ensure transparency through proactive public information efforts** to support the BRA's mission and goals

1. Speaker's Bureau
2. Website and **Facebook Social Media Programs**
3. BRA email newsletter
4. Water school section of website
5. Major Rivers Educational Program
- 6. Brazos Basin Now**
- 7. Educational Events**

b. Allow public access to BRA records and information in compliance with Freedom of Information Act and Texas Open Government provisions

1. Open records requests via the BRA website



Goals, Objectives and Strategies

c. Develop positive working relationships with legislators, local elected officials, customers, and other stakeholders in order to strategically position BRA to accomplish its goals

1. Meetings and briefings held to provide information and updates
2. Act as a source of information for policy discussions
3. Manage local issues as needed for elected officials
4. Annual regional customer meetings
5. Create local stakeholder groups to facilitate dialogue where possible and appropriate

~~d. Ensure transparency in all BRA programs and services by providing information on the BRA website, through social media, and to interested stakeholders~~

- ~~1. Continual updates of BRA website and Facebook page with new content~~
- ~~2. BRA email newsletter~~

Goals, Objectives and Strategies

- d. Maintain transparency in BRA's finances and operations **by providing timely posting of reports on BRA website including:**
 - 1. Comprehensive Annual Financial Report (CAFR)
 - 2. Annual Operating Plan (Budget)
 - 3. Check Registers**
 - 3. Annual Retirement Financial Report
 - 4. Quarterly Financial Reports
 - 5. Quarterly Investment Reports
 - 6. Annual Debt Information
 - 7. Long Range Financial Plan (last updated in FY 2011)
- e. Ensure accountability to our customers, the legislature, and the public by cooperatively participating in statutorily required external audits and review processes
 - 1. 5-year Management audits as needed
 - 2. Sunset review process
 - 3. Annual network penetration testing to identify and correct potential vulnerabilities**

Goals, Objectives and Strategies

- VI. The BRA will develop and retain employees to support the BRA's strategic vision, enhance diversity in the workforce, and prepare the BRA to accomplish its mission.
 - a. Recruit, develop and retain the right people for the right job
 - 1. Attend job fairs and recruiting events to promote BRA employment opportunities
 - 2. Enhance recruiting efforts by building relationships with community organizations, colleges and multicultural groups, and by utilizing diverse social media outlets
 - 3. ~~Provide Training and advancement opportunities~~ Invest in employee training and development programs, compensate for critical skills, and provide growth and advancement opportunities
 - 4. Maintain equitable compensation system
 - 5. Provide a secure retirement benefit
 - b. Promote an organizational culture that values employee contributions, encourages collaboration, supports diversity and recognizes achievements
 - 1. Foster positive employee relations
 - 2. Service and Safety Award Program

Goals, Objectives and Strategies

- c. Ensure operational efficiency throughout programs and processes
 - 1. Improve Project Management Program through increased training and enhancement of processes and procedures
 - 2. Implementation of Microsoft 365 to ensure high availability of data and facilitate efficient archiving and searching of data
 - 3. Continue development of internal and external applications to support business needs
- d. Improve internal communication and coordination between functional groups
 - 1. Utilize Staff Summary Sheets
 - 2. Development of Project Management Guidelines
 - 3. Training of audio and video conferencing software and tools
- e. Conduct business with a customer service focus
 - 1. Educate customers and the public on BRA reservoir operations, drought and flooding conditions, and system operations issues.
 - 2. Enhance secure electronic collaboration and sharing of information with external entities

Goals, Objectives and Strategies

- f. Encourage a healthy workforce through programs and initiatives
 - 1. Holistic wellness initiative that includes health and wellness training, **annual health fairs**, access to fitness and health-related materials, **and** alternative work schedules to allow time for exercise **and annual wellness visits**, ~~provide annual health fairs, biometric screenings, blood draws and immunizations~~
- g. Ensure a safe working environment, promote a safety conscious attitude in all employees and facilitate the implementation of proactive steps to reduce accidents and incidents
 - 1. **Deploy a comprehensive program to continuously improve culture of health and safety at home, in public, and in personal lives**
 - 2. Conduct monthly employee safety training
 - 3. Effectively **implement and** utilize Engineering and Administrative Controls and Personal Protective Equipment (PPE)



FY2020 Annual Operating Plan

**Presented by
David Thompson
Chief Financial Officer**



BRA Business Model

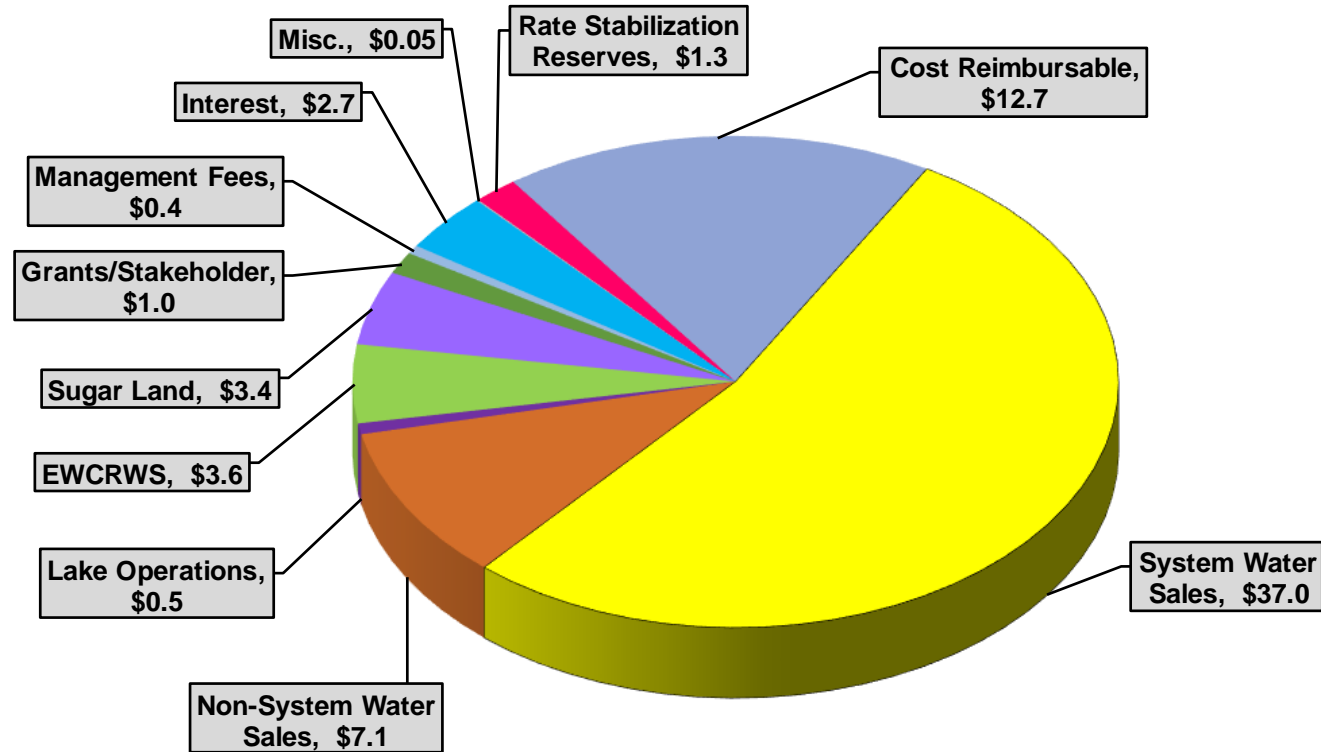
Elements of Ratemaking

	FY 19 Budget (in 000's)	FY 20 Budget (in 000's)
Water Supply Expenses		
Water Supply O&M Expenditures	\$39,517	\$42,729
Water Supply Debt Service (subject to coverage)	\$2,538	\$2,535
Water Supply Debt Service (not subject to coverage)	\$2,475	\$3,770
Operating Project Expenditures	\$2,197	\$7,243
Total Water Supply Expenses	\$46,727	\$56,277
Non-System Water Rate Revenues		
Non-System Water Revenues	(\$6,965)	(\$7,167)
Other Water Supply Revenues	(\$10,264)	(\$11,618)
Total Non-System Water Rate Revenues	(\$17,229)	(\$18,784)
Debt Coverage Requirement (1.3 ratio)	\$762	\$760
Gross Financial Requirement	\$30,260	\$38,253
Total System Water Billing Units (acre feet)	371,712	467,974
Calculated System Rate (Gross Financial Requirement/Number of System Rate Units)	<u>\$81.50</u>	<u>\$81.80</u>
Rate Stabilization Reserve Contribution	(\$1,825)	(\$1,300)
Net Financial Requirement (Gross Financial Requirement less Rate Stabilization Fund Contribution)	\$28,435	\$36,953
Effective System Rate (Net Financial Requirement/Number of System Rate Units)	<u>\$76.50</u>	<u>\$79.00</u>

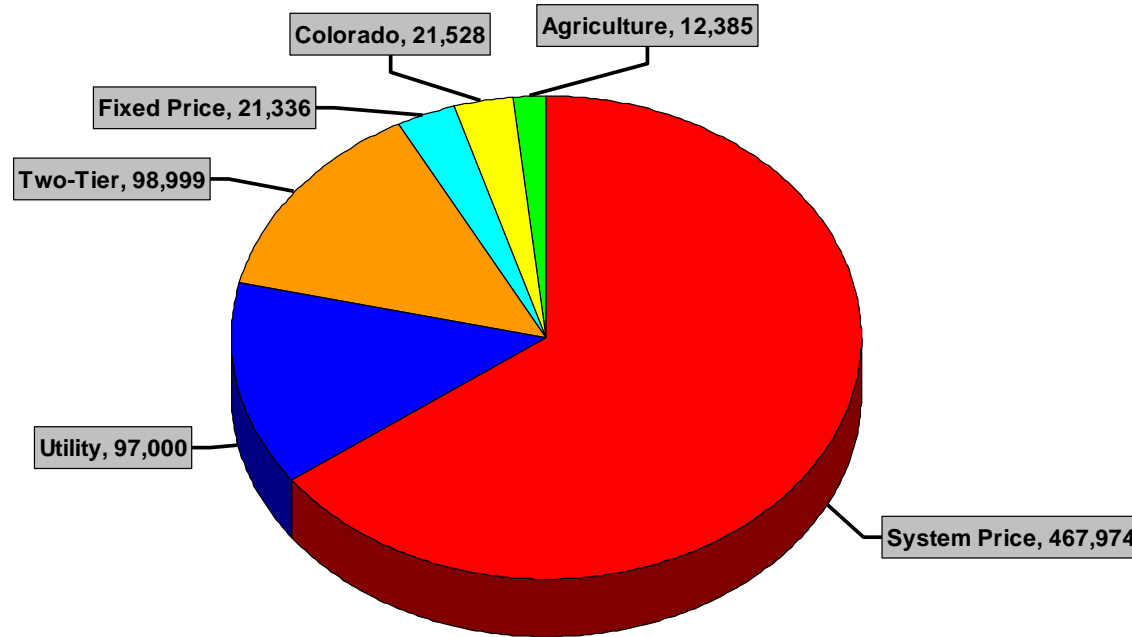


FY2020 Proposed Revenues

\$69.7M



FY2020 Long Term Raw Water Sales 719,222 AF



Long Term Billing Units & Average Price

	FY2019			FY2020		
	Units	Avg Price	%	Units	Avg Price	%
System Rate	371,712	\$76.50	59%	467,974	\$79.00	59%
Agricultural	10,285	\$53.55	2%	12,385	\$55.30	2%
Two-Tier	98,999	\$17.54	16%	98,999	\$17.89	14%
Other Fixed Price	33,778	\$19.06	5%	21,336	\$23.71	3%
Utilities	97,000	\$19.28	15%	97,000	\$19.28	13%
Colorado Basin	21,528	\$83.33	3%	21,528	\$83.33	3%
	<u>633,302</u>		<u>100%</u>	<u>719,222</u>		<u>100%</u>

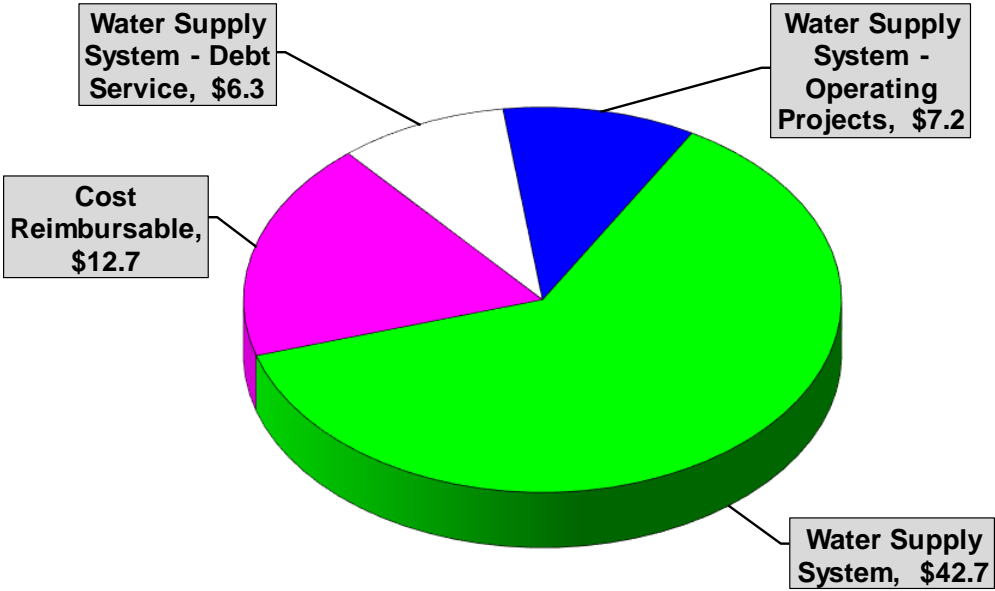


Expense Assumptions

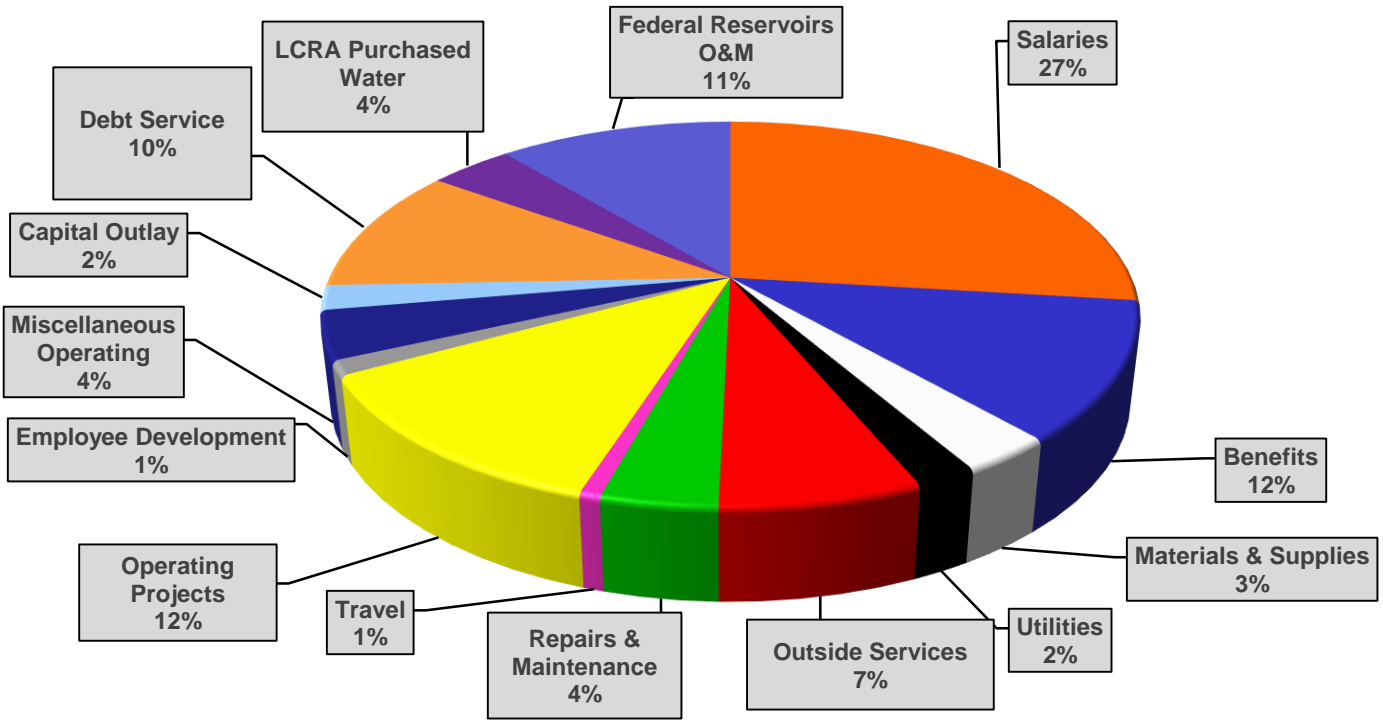
- **Employee compensation & benefits**
 - **2.4% Authority-Wide Salary Adjustment**
 - **2.6% Performance/Incentive Pay Pool**
 - **Benefits – 13.22% increase (primarily health care costs)**
 - **Net increase of five full-time positions and one part-time position**
 - **Assumption of the 70% Allen Creek debt service payment for the city of Houston**



FY2020
Proposed Operating Expenses
\$69.0M




FY 2020 Proposed Water Supply System O&M Expenses by Category





Water Supply System O&M Expenses by Department (excluding Central Services overhead) (in thousands)

	<u>FY2019 Budget</u>	<u>FY2019 Projected</u>	<u>FY2020 Proposed</u>
Possum Kingdom Lake	\$ 6,450	\$ 6,438	\$ 6,759
Lake Granbury	2,250	2,166	2,549
Lake Limestone	1,891	1,522	1,812
Allens Creek	16	5	16
East Williamson Co. RWS Ops	1,594	1,289	1,562
Sugar Land	3,016	3,039	3,180
Federal Reservoirs & Water Contracts	9,963	8,461	11,430
Regional Basin Management	1,804	1,683	2,192
Technical Services	2,208	1,966	1,977
Water Services	791	849	849
Environmental Services	2,268	2,146	2,426
Planning Services	217	213	227
Central Services	7,549	7,374	8,200
Central Services Allocated Out	(434)	(436)	(450)
Debt Service	5,011	5,011	6,305
Operating Projects	2,197	1,851	7,243
Total	<u>\$ 46,790</u>	<u>\$ 43,576</u>	<u>\$ 56,277</u>

<div>  <div> <div>Brazos River Authority</div> </div> </div> <div> <div>FY2020 Proposed Operating Projects</div> <div>(in thousands)</div> </div>		
Project Name	FY2020 Projected Expenditures	
PK Concrete Assessment & Service Life Extension	\$	1,350
Security and Vulnerability Assessment Updates		595
Integrated Water Resources Plan		510
Risk Based Capital Planning & Mgmt. Support		469
USFWS Mussel Studies		460
Lake Limestone Fiber Optic Cable Upgrade		360
Enterprise Financial Software		336
Lake Whitney Reallocation Study		297
Possum Kingdom Facilities		280
PK Red Bluff Bridge Repair		274
LL Stilling Basin Dewatering Design & Construction		266
PK Village/Observation Point Chip Seal		265
Engineering Support for Technical Evaluations		250
Potential Future Water Mgmt Strategies		225
Facility Safety & Systems Support		213
Brazos Water Snake Study		200
Williamson County Aquifer Storage & Recovery *		200
PK Fiber Optic Cable Upgrade		200
EWC Fiber Optic Cable Upgrade		150
HB 1437 No Net Loss *		80
Downstream Riparian Restoration		76
Brazos River Alluvium Study		50
LG Tainter Gate Evaluation		50
PK Operating Pier Trash Rack Replacement		46
COE Pool Rise Feasibility Study		41
	\$	7,243
Less Grant/Stakeholder Funding *		(140)
Net BRA Expense	\$	7,103

Water Supply Costs

- **COE costs (O&M and debt service) budgeted for FY 2020 are \$8.2 million and that is about \$17.80/AF for the system rate.**

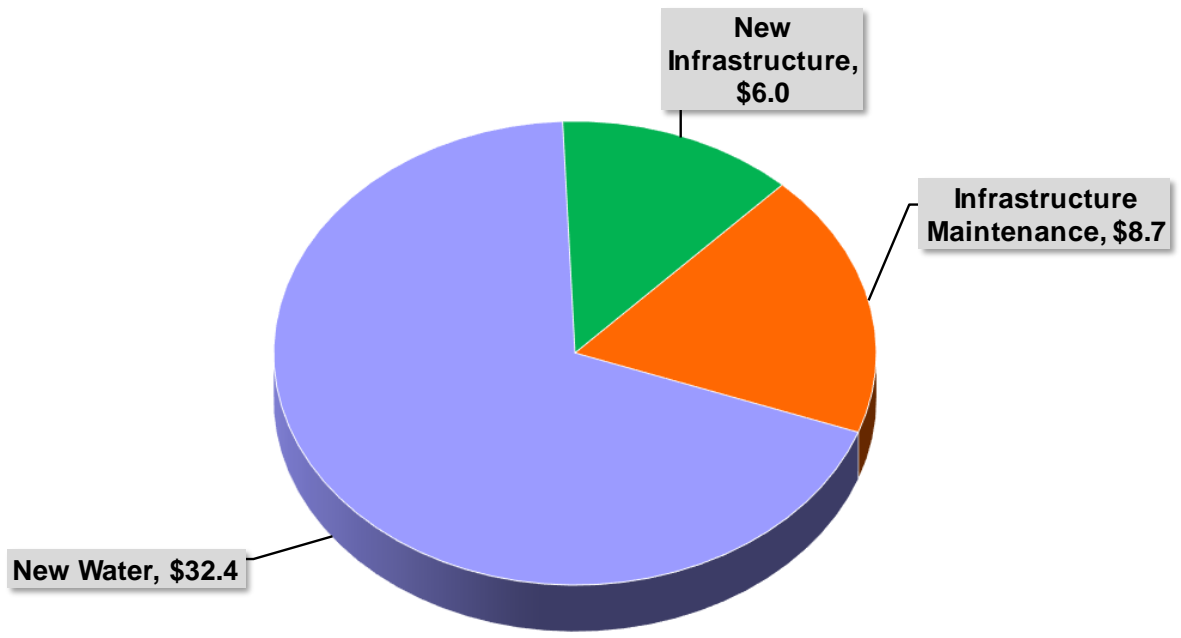


Fiscal Year 2020

Multi-Year Capital Improvement Plan



FY2020 Proposed Capital Improvement Projects by Type \$47.1M





FY2020 Proposed Capital Improvement Projects

(in thousands)

<u>Project Name</u>	<u>Total Project Cost</u>	<u>FY2020 Projected Expenditures</u>	<u>Est. Completion Date</u>
UB-LG-Low Flow Facilities	\$ 4,470	\$ 734	2021
UB-LG-Reinforced Concrete Components	1,273	635	2021
UB-LG Trolley Replacement	2,648	1,394	2021
UB-PK-Bay #9 Weir Box	429	329	2020
UB-PK-COC Access Platforms	592	51	2020
UB-PK-Southside Boathouse	479	404	2020
UB-PK-Spillway Pump & Piping	605	380	2021
UB-PK-Spillway Gate Actuators	1,896	869	2021
CB-BE-Lake Belton-Stillhouse Pipeline	33,325	2,764	2024+
CB-EW-EWCRWS Expansion Phase 2	15,216	1,036	2023
CB-OT-Trinity Groundwater	23,498	2,040	2022
LB-AC-Allens Creek	427,897	30,359	2024+
LB-LL-Embankment Hydrostatic Relief	3,575	418	2023
LB-LL-Low Flow Facility Modifications	20,070	51	2024+
LB-LL-Park 5 Access Pier	877	877	2020
LB-LL-Tainter Gate Replacement	35,660	3,906	2023
UB-LG-Lake Granbury Road Repairs	1,131	392	2020
CO-ES-Environmental Services Building	3,993	443	2022
Total		<u>\$ 47,082</u>	

Meeting Date: July 29, 2019

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FY2020 Budget Summary

All Lines of Business (in millions)

	Water Supply	Cost Reimbursable	Total
<u>Beginning Reserves</u>	\$ 85.3	\$ -	\$ 85.3
Revenues	57.0	12.7	69.7
Expenses - O & M	(42.7)	(9.2)	(51.9)
Expenses - Debt Service	(6.3)	(3.5)	(9.8)
Operating Projects	(7.2)	-	(7.2)
Surplus	0.8	-	0.8
Capital Improvement Projects	(47.1)	-	(47.1)
Rate Stabilization Reserves Used	(1.3)	-	(1.3)
<u>Ending Reserves</u>	\$ 37.7	\$ -	\$ 37.7
90 Day Working Capital Reserve - Per Board Policy			\$ 10.5

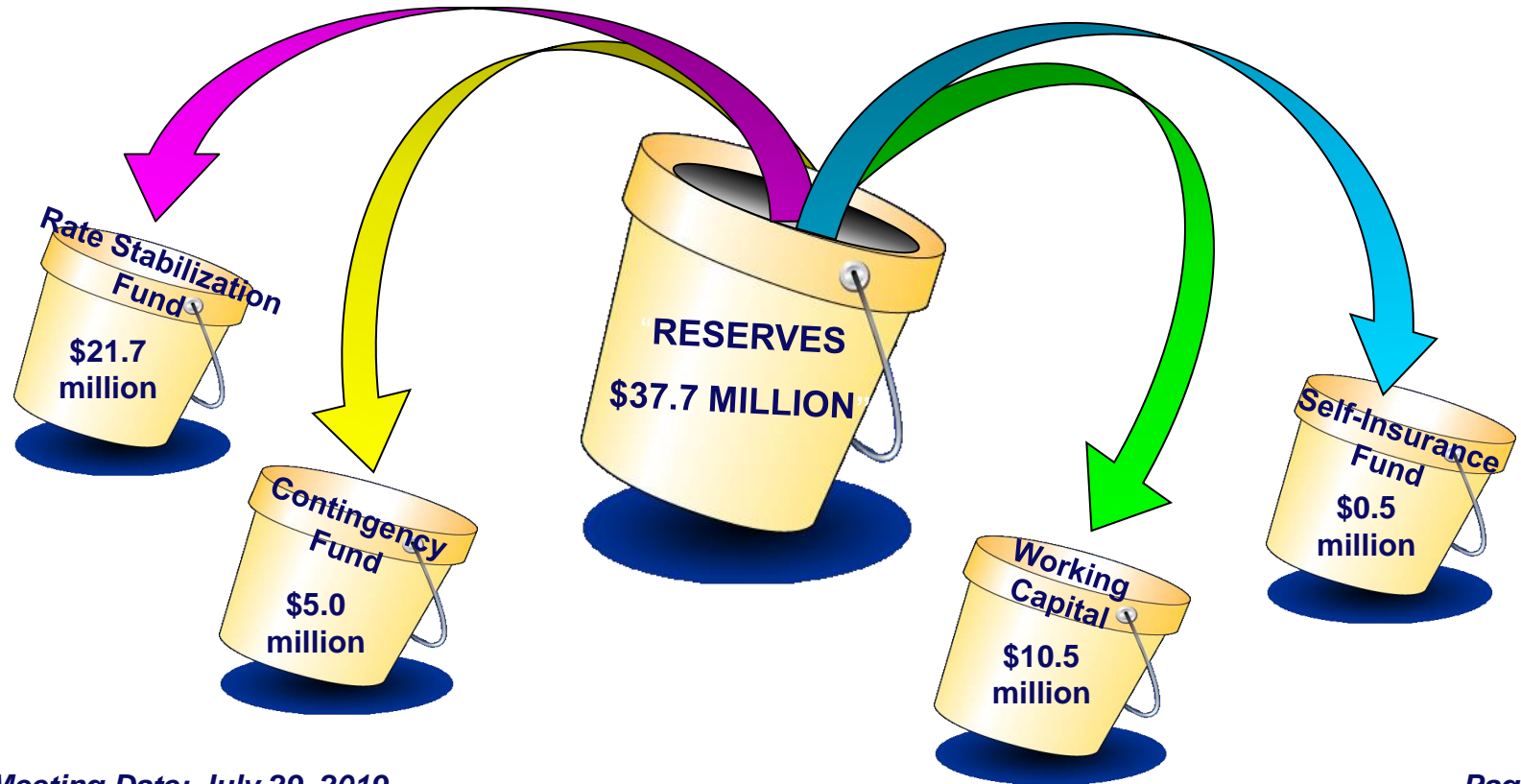
Water Supply System

Reserves Overview (in millions)

		FY2020
Projected Beginning Balance (September 1, 2019)		\$ 85.3
Operations Surplus		\$ 0.8
Capital Expenditures		\$ (47.1)
	Allens Creek Reservoir	(30.4)
	Morris Sheppard Dam Improvements	(1.6)
	DeCordova Bend Dam Improvements	(2.8)
	Trinity Groundwater	(2.0)
	Lake Belton-Stillhouse Hollow Pipeline	(2.8)
	Sterling Robertson Dam Improvements	(4.4)
	LG/LL Road/Park Repairs	(1.3)
	Other	(1.8)
Rate Stabilization Reserves Utilized		\$ (1.3)
Ending Balance (August 31, 2020)		\$ 37.7

Reserve (Working Capital) Funds

Projected for August 31, 2020





Current Debt Outstanding

(in millions)

	<u>Aug. 31, 2019</u>	<u>Aug. 31, 2020</u>
<u>Water Supply System (BRA)</u>		
Revenue Bonds *	\$ 32.7	\$ 44.9
Federal Reservoirs	<u>20.4</u>	<u>19.4</u>
Subtotal	53.1	64.3
<u>Contract Revenue Debt</u>		
Water Conveyance (WCRRWL)	<u>29.3</u>	<u>28.4</u>
Total Debt Outstanding	<u>\$ 82.4</u>	<u>\$ 92.7</u>

* Includes \$14 million in existing TWDB debt assumed from the City of Houston for Allens Creek in FY 20

Proposed changes to the BRA's payment option methodology

- Last year the board requested that we revisit interest charged to our customers for financing options.
- Staff was directed to review the calculation in the next fiscal year's budget to make a more appropriate rate.
- Recommended change in the FY 2020:
 - Proposed change the interest rate charged from our earnings rate (2.53%) to a borrowing rate of 4%.



Five-Year Financial Forecast Water Supply System FY2020 - FY2024



Assumptions - Revenues

- **Raw Water System rate – 3.3% to 6.0% Increase – FY2020–FY2024**
- **Raw Water Non-System – Consistent with Current Contract Terms**

Assumptions - Expenses

- **O&M Expense Increased by Historical Ten Year Index Rolling Averages for FY2021 - FY2024**
- **Debt Service – Assumes Existing Debt, Assumption of City of Houston’s existing \$14 million in Allens Creek Debt and Potential New Debt for FY2021 - FY2023**



Five-Year Financial Forecast

(in millions)

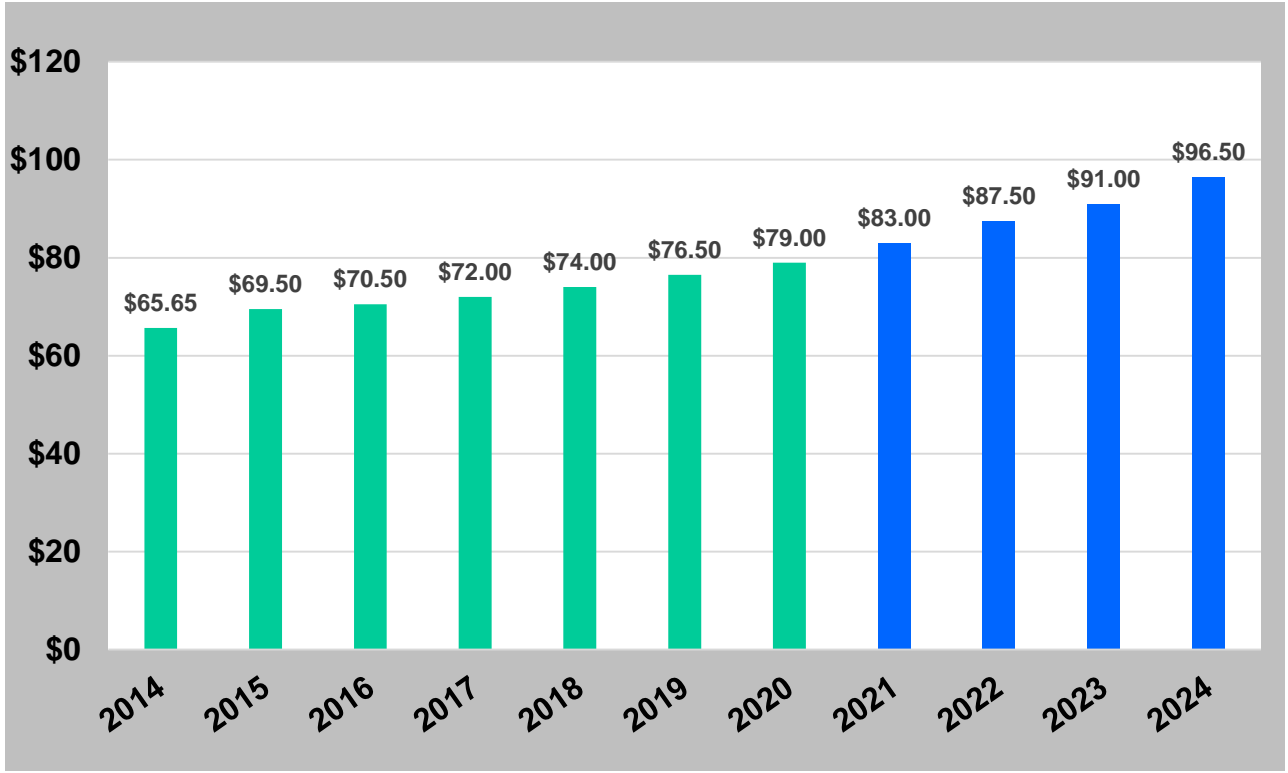
<u>WATER SUPPLY SYSTEM</u>	<u>FY2020</u>	<u>FY2021</u>	<u>FY2022</u>	<u>FY2023</u>	<u>FY2024</u>
Beginning Reserves	\$ 85.3	\$ 37.7	\$ 26.1	\$ 25.1	\$ 28.3
Revenues	57.1	60.7	62.5	64.5	68.2
Expenses	(53.7)	(55.0)	(56.4)	(55.0)	(58.3)
Revenue Available for Coverage	3.3	5.7	6.1	9.4	9.9
Debt Service Subject to Coverage:	(2.5)	(3.1)	(4.6)	(5.2)	(5.5)
Net Surplus (Deficit)	0.8	2.6	1.5	4.2	4.4
Capital Projects	(47.1)	(41.0)	(44.9)	(19.7)	(41.2)
Bond Proceeds	-	27.8	42.3	18.7	33.3
Rate Stabilization Reserves Used	(1.3)	(1.0)	-	-	-
Ending Reserves	\$ 37.7	\$ 26.1	\$ 25.1	\$ 28.3	\$ 24.9
 Working Capital Reserve	 10.5	 10.9	 11.3	 11.8	 12.3

Five-Year Financial Forecast

WATER SUPPLY SYSTEM	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
System Rate Projection	\$79.00	\$83.00	\$87.50	\$91.00	\$96.50
Percentage Increase	3.27%	5.06%	5.42%	4.00%	6.04%
Debt Service Coverage	1.31	1.84	1.34	1.81	1.80

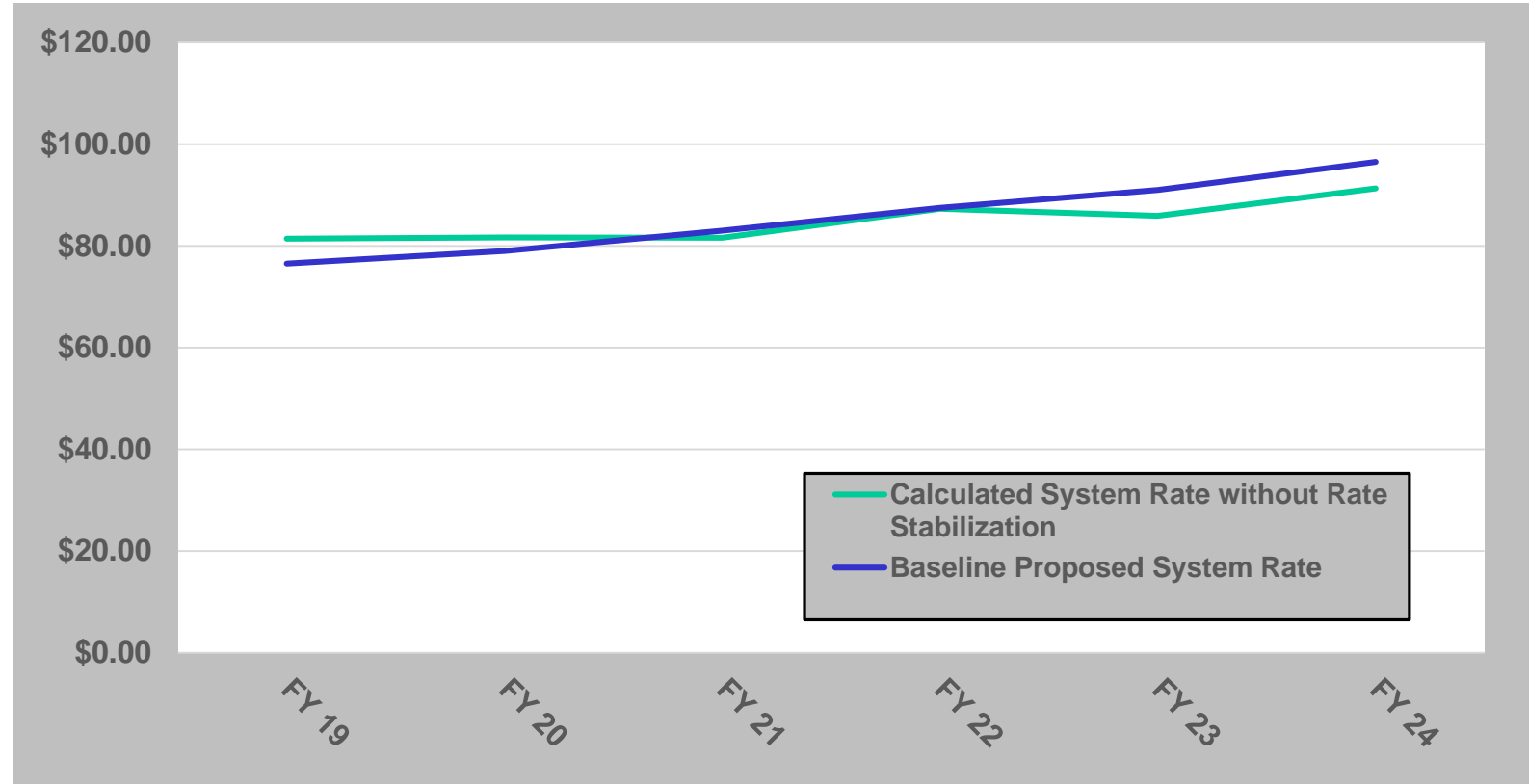


System Rate History/Forecast





Forecasted System Rate





Brazos River Authority



Brazos
— ★ —
RIVER AUTHORITY