



Raw Water
Ten-Year Project Plan
FY 2024 – FY 2033

Date: 05/22/2023

CONTENTS

Raw Water Executive Summary	1
Raw Water Projects Summary Sheet	2
Individual Project Sheets.....	3

**Raw Water
Ten Year Project Plan
Executive Summary
FY 2024 – FY 2033 Projects**

Introduction

The purpose of the Raw Water 10-Year Project Plan for Fiscal Years (FY) 2024 through 2033 is to identify potential projects and associated funding requirements for (1) long-range planning of raw water supplies for both Montgomery County and SJRA’s Highlands Service Area, (2) periodic raw water rate studies as required by customer contracts, (3) the study of potential raw water supply strategies, and (4) the implementation of raw water permitting and supply projects as needed.

Key Focus Areas:

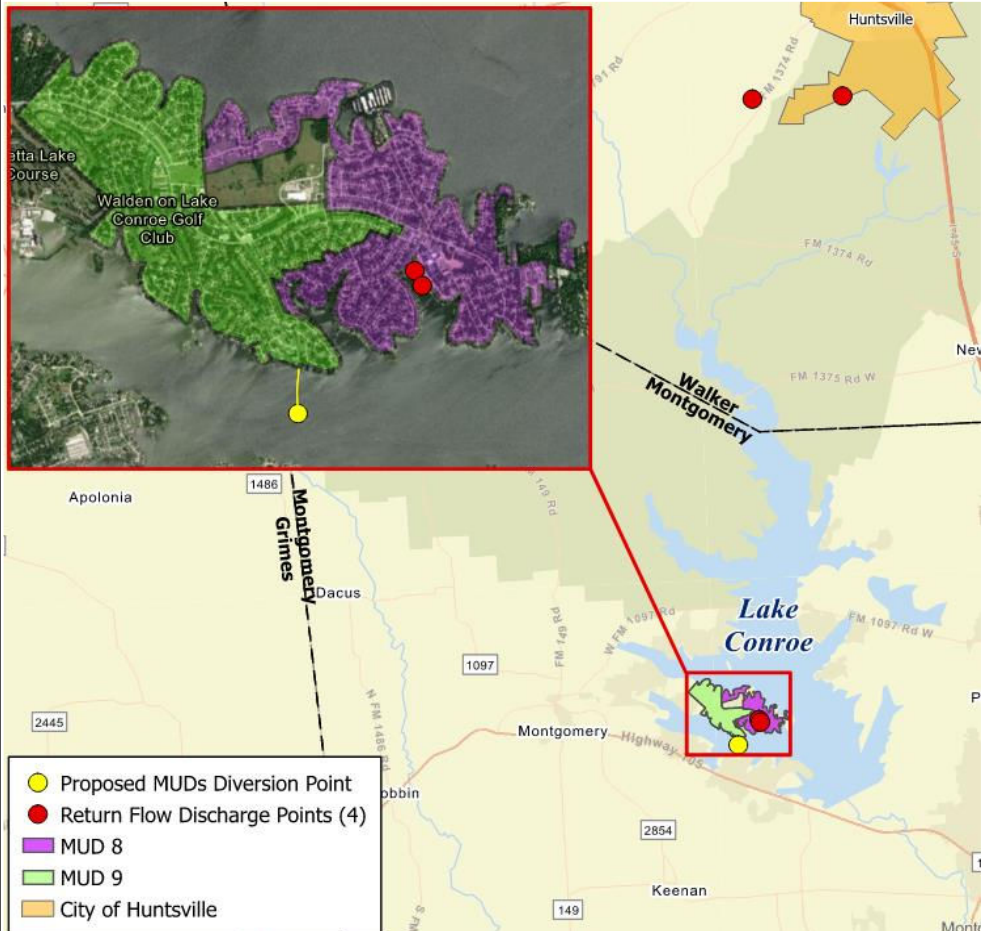
- Updating SJRA’s Raw Water Supply Master Plan (RWSMP) to ensure regional water planning is kept up to date with the best and most recent information available.
- Implementing studies and projects to further the recommendations of the RWSMP, to ultimately ensure the availability of water to customers in SJRA’s service areas in the future.
- Determining appropriate future raw water rates based on updated rate studies and modeling.

Total Projected Costs (All Projects)	
FY 2024	\$640,500
FY 2025	\$572,500
FY 2026	\$462,500
FY 2027 – FY 2033	\$10,673,500
Total	\$12,349,000

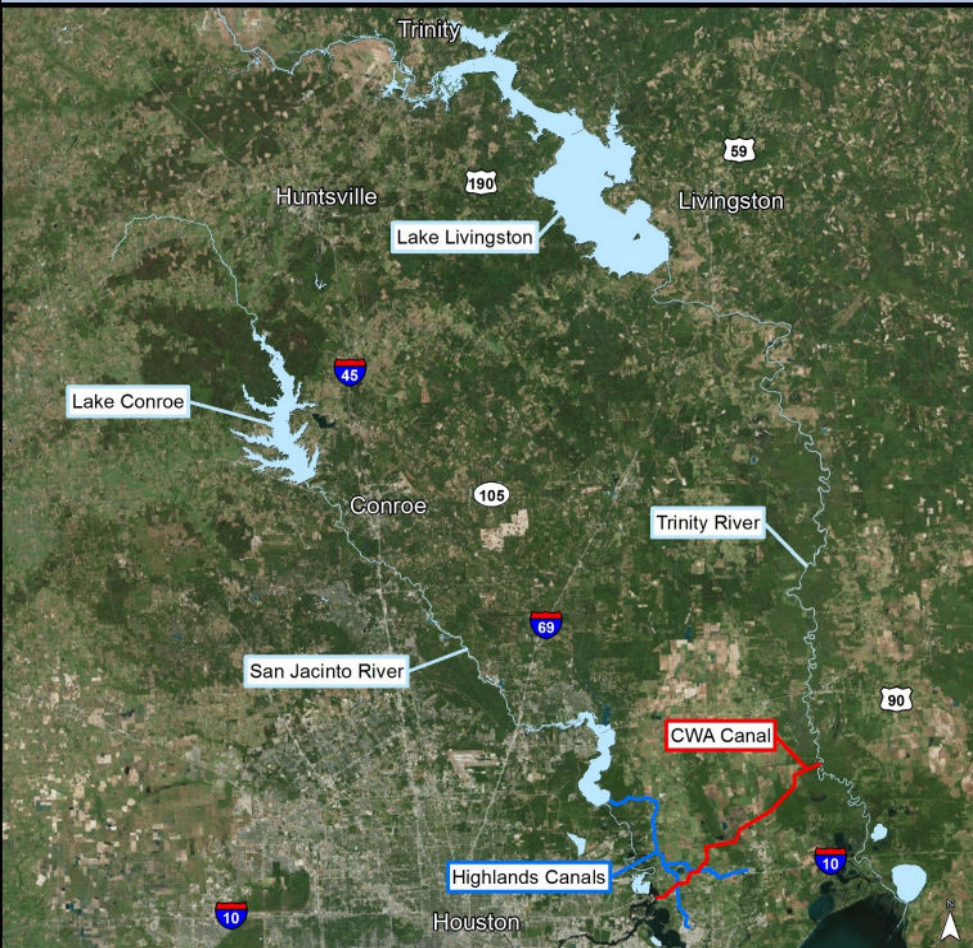
Raw Water Project Summary

Raw Water Enterprise
FY 2024 - FY 2033 Project Cash Flow Summary

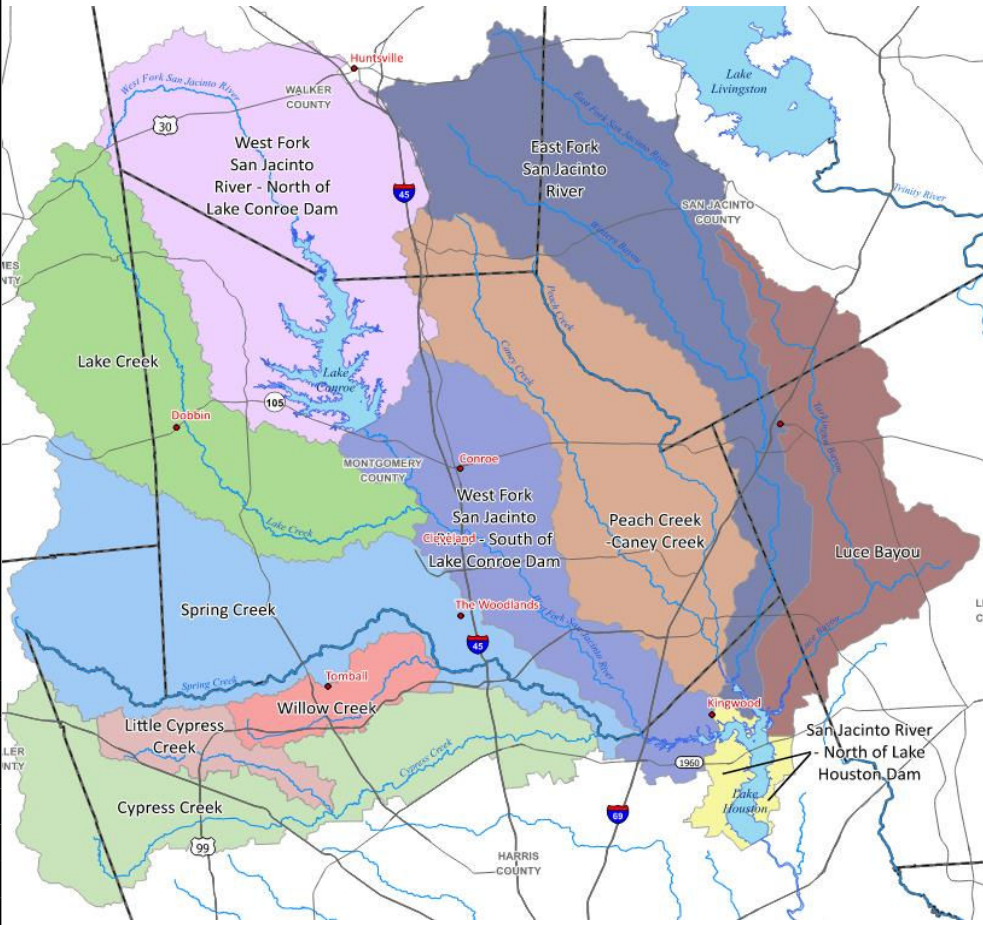
PAGE NO.	PROJECT ID	PROJECT NAME	ESTIMATED EXPENDITURES THROUGH END OF FY 2023	2024 ESTIMATE	2025 ESTIMATE	2026 ESTIMATE	2027 ESTIMATE	2028 ESTIMATE	2029 ESTIMATE	2030 ESTIMATE	2031 ESTIMATE	2032 ESTIMATE	2033 ESTIMATE	TOTAL
3	RM89H	MUDs 8&9 and Huntsville Return Flows Water Right Permit	\$ 140,000	\$ 105,000	110,000	-	-	-	-	-	-	-	-	\$ 355,000
4	RWSMP	Raw Water Supply Master Plan Updates	\$ 248,368	\$ 50,000	-	-	\$ 323,000	\$ 332,000	\$ -	\$ -	\$ -	\$ 374,000	\$ 385,000	\$ 1,712,368
5	RRFFS	Regional Return Flows Feasibility Study and Permitting	\$ 360,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,360,000
6	RWRSY	Raw Water Rate Study	\$ 168,142	\$ -	\$ -	\$ -	\$ -	\$ 253,000	\$ -	\$ -	\$ -	\$ -	\$ 294,000	\$ 715,142
7	RASRF	ASR Aquifer Characterization Study	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	RTRIT	Trinity River Transfer	\$ 47,000	\$ 48,000	\$ 25,000	\$ 25,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,407,500
		Trinity River Transfer (TRA Fees)	\$ 237,500	\$ 237,500	\$ 237,500	\$ 237,500	\$ 1,187,500	\$ 1,187,500	\$ 1,187,500	\$ 1,187,500	\$ 1,187,500	\$ 1,187,500	\$ 1,187,500	
		TOTAL SJRA (NON-TRA FEES)	963,510	403,000	335,000	225,000	523,000	785,000	-	-	-	374,000	679,000	\$ 4,287,510
		TOTAL TRA FEES	237,500	237,500	237,500	237,500	1,187,500	1,187,500	1,187,500	1,187,500	1,187,500	1,187,500	1,187,500	\$ 9,262,500
	TOTALS		\$ 1,201,010	\$ 640,500	\$ 572,500	\$ 462,500	\$ 1,710,500	\$ 1,972,500	\$ 1,187,500	\$ 1,187,500	\$ 1,187,500	\$ 1,561,500	\$ 1,866,500	13,550,010

PROJECT NAME				PROJECT ID		FISCAL YEAR		DIVISION					
MUDs 8&9 and Huntsville Return Flows Water Right Permit				RM89H		2022-2025		Raw Water Enterprise					
PROJECT DESCRIPTION						PROJECT MAP/PICTURE							
<p>In July 2017, SJRA entered into an agreement with Montgomery County Municipal Utility District Nos. 8 and 9 (the MUDs), the City of Houston (Houston), and the City of Huntsville (Huntsville) regarding permit applications submitted to, and since subsequently approved by, the Texas Commission on Environmental Quality (TCEQ), by the MUDs and Huntsville for bed and banks conveyance and subsequent diversion of return flows from Lake Conroe. As part of that agreement, the MUDs and Huntsville agreed to provide SJRA and Houston with a total of twenty-one percent of the quantity of return flows conveyed to Lake Conroe (the Water Commitment) pursuant to the above-referenced permits (Water Use Permit Nos. 12510 and 12754). This project includes the development and submittal of application(s) to the TCEQ for a water right authorizing SJRA and Houston to divert the Water Commitment, as well as required subsequent coordination with TCEQ.</p>													
PROJECT SCHEDULE				DELIVERY	FUNDING	<div><div><div></div><div>Proposed MUDs Diversion Point</div></div><div><div></div><div>Return Flow Discharge Points (4)</div></div><div><div></div><div>MUD 8</div></div><div><div></div><div>MUD 9</div></div><div><div></div><div>City of Huntsville</div></div></div>							
Initiate Cons. Selection:	Completed	<input type="checkbox"/> CSP	<input checked="" type="checkbox"/> O&M										
PSA/WO Issued:	Completed	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Bonds										
Final Proposal Docs:	N/A	<input type="checkbox"/> R&R	<input type="checkbox"/> Other										
Proposals/Bids Received:	N/A	Professional											
Constr. Contract to Board:	N/A	<input checked="" type="checkbox"/> Capitalized	<input type="checkbox"/> Expensed										
Substantial Completion:	FY 2025												
BUDGET*	TOTAL	PREVIOUS	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
Planning/Permitting/PER	\$ 355,000	\$ 140,000	\$ 105,000	\$ 110,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Engineering/Design	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Construction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
CPS, CM&I, and CMT	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Land Acquisition	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Equipment Purchase	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total	\$ 355,000	\$ 140,000	\$ 105,000	\$ 110,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

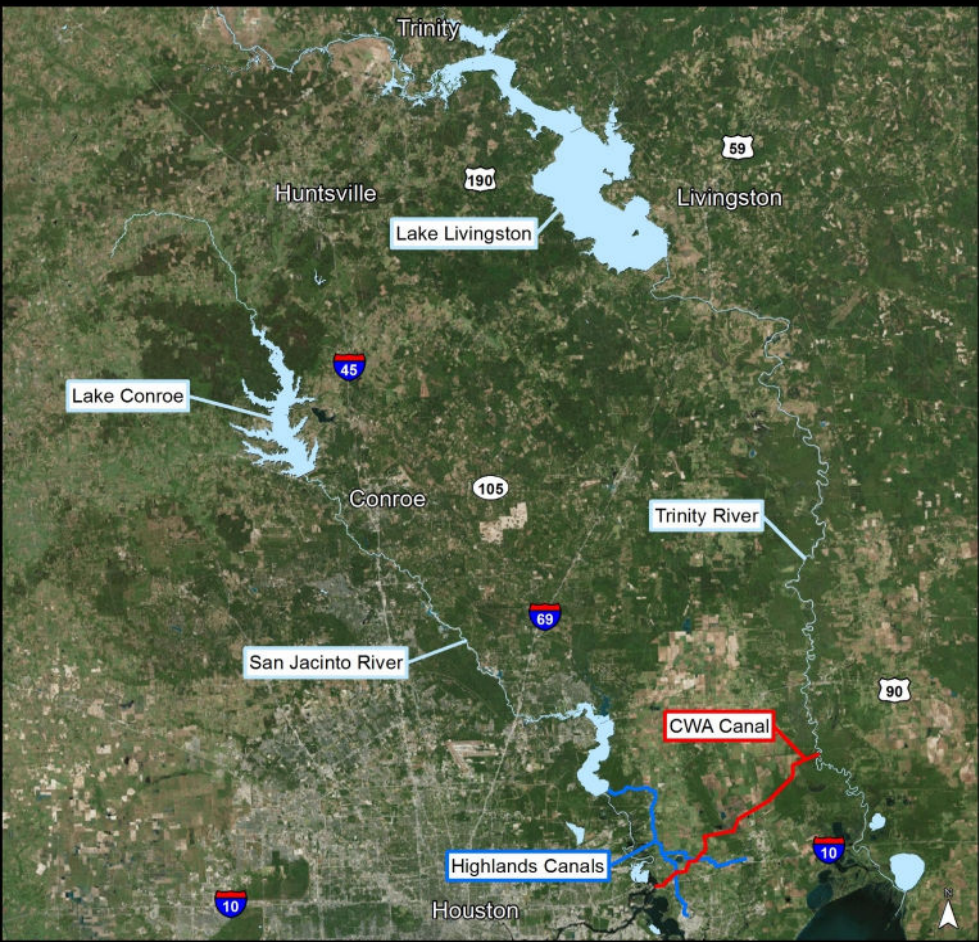
*Budget includes contingency.

PROJECT NAME				PROJECT ID		FISCAL YEAR		DIVISION				
Raw Water Supply Master Plan Updates				RWSMP		2022-24/2027-28/2032-33		Raw Water Enterprise				
PROJECT DESCRIPTION						PROJECT MAP/PICTURE						
<p>SJRA's previous Raw Water Supply Master Plan (RWSMP) determined 50-year demand projections for industrial, municipal, and irrigation water usage for SJRA's Montgomery County and Highlands service areas, and identified and evaluated several strategies or water-supply sources for meeting these demands, including a portfolio of recommended strategies for each service area.</p> <p>RWSMP updates will incorporate new data (census, updated technical data, cost estimates, regulatory changes, etc.) and perform updated analysis of water supply strategies and portfolios to ensure regional water supply master planning is kept up to date. Previously analyzed and recommended strategies, as well as newly identified strategies, as appropriate, will be updated and analyzed to confirm, adjust, and/or improve the recommended supply portfolios for each service area. As available and appropriate, data from the most recent Region H Regional Water Planning cycle will be utilized and incorporated in each update.</p> <p>A minor RWSMP update, involving no major methodology or decision support model overhauls, will be completed in FY 2023. The timing of this update correlates with the availability of new census data and development of the 2026 Region H Regional Water Plan. FY 2024 may include consultant support related to review of any proposed updated Montgomery County groundwater pumpage limits, as well as associated updates to the RWSMP.</p> <p>Major RWSMP updates are planned for FY 2027/28 and every 5 years thereafter. These updates may include methodology/modeling changes, and potential robust stakeholder engagement.</p>												
PROJECT SCHEDULE				DELIVERY	FUNDING							
Initiate Cons. Selection:		Completed/FY 26/FY 31		<input type="checkbox"/> CSP	<input checked="" type="checkbox"/> O&M							
PSA/WO Issued:		Completed/FY 26/FY 31		<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Bonds							
Final Proposal Docs:		N/A			<input type="checkbox"/> R&R							
Proposals/Bids Received:		N/A			<input type="checkbox"/> Other							
Constr. Contract to Board:		N/A		Professional								
Substantial Completion:		FY2024 - Q4/FY 28/FY 33		<input type="checkbox"/> Capitalized	<input checked="" type="checkbox"/> Expensed							
BUDGET*	TOTAL	PREVIOUS	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Planning/Permitting/PER	\$ 1,712,368	\$ 248,368	\$ 50,000	\$ -	\$ -	\$ 323,000	\$ 332,000	\$ -	\$ -	\$ -	\$ 374,000	\$ 385,000
Engineering/Design	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Construction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CPS, CM&I, and CMT	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Land Acquisition	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Equipment Purchase	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 1,712,368	\$ 248,368	\$ 50,000	\$ -	\$ -	\$ 323,000	\$ 332,000	\$ -	\$ -	\$ -	\$ 374,000	\$ 385,000

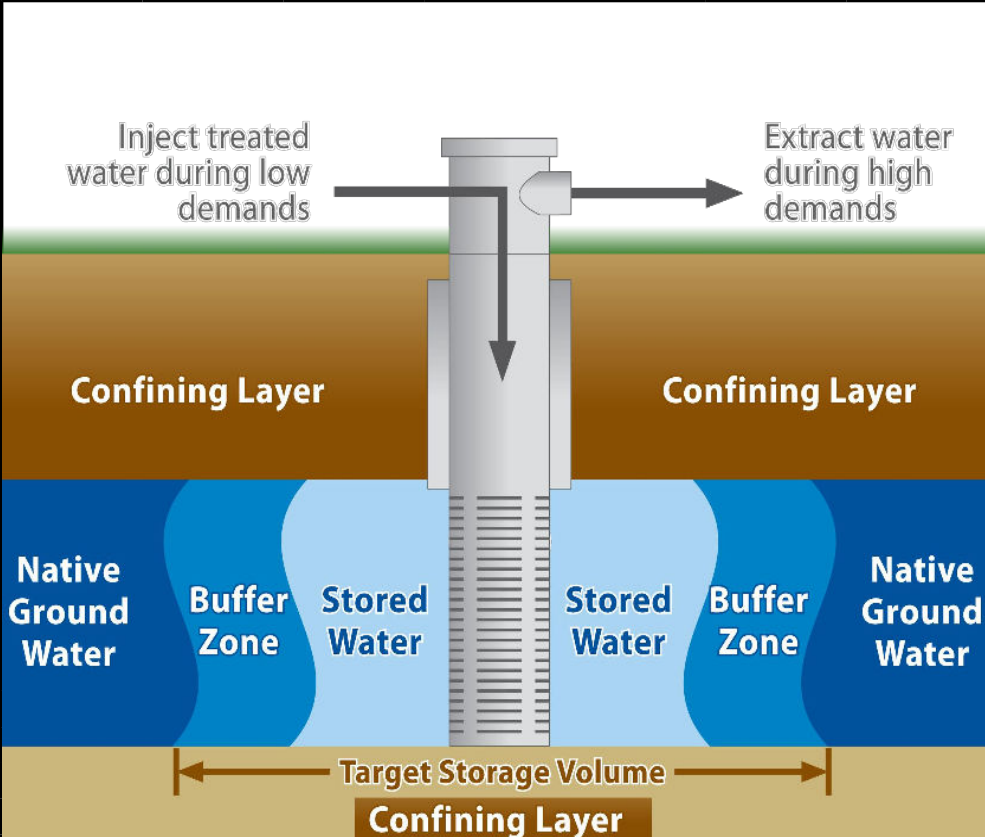
*Budget includes contingency.

PROJECT NAME				PROJECT ID		FISCAL YEAR			DIVISION				
Regional Return Flows Feasibility Study and Permitting				RRFFS		2022-2028			Raw Water Enterprise				
PROJECT DESCRIPTION						PROJECT MAP/PICTURE							
<p>This effort includes identification and permitting of regional return flows as a water supply strategy. SJRA's 2018 Raw Water Supply Master Plan recommended regional return flows as a water supply strategy for future Montgomery County needs, and return flows may be a viable and needed source of water supply in the Highlands service area as well. Throughout the San Jacinto River Basin, development is steadily overtaking the traditional, rural pattern that has historically been present in much of the area. Over time, homes with individual wells and on-site sewage systems are being replaced with homes served by master-planned water and wastewater service from centralized utility systems. It is these latter types of development that produce opportunity for the development of return flows from wastewater treatment facilities (WWTF) via permitting of WWTF discharges and conveyance of flows using bed and banks permits. Efforts included as part of this project include identification of return flows available to be permitted, as well as actual permitting / contracting required for SJRA to secure these identified flows.</p>													
PROJECT SCHEDULE				DELIVERY	FUNDING								
Initiate Cons. Selection:		Completed	<input type="checkbox"/> CSP	<input checked="" type="checkbox"/> O&M									
PSA/WO Issued:		Completed	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Bonds									
Final Proposal Docs:		N/A		<input type="checkbox"/> R&R									
Proposals/Bids Received:		N/A		<input type="checkbox"/> Other									
Constr. Contract to Board:		N/A	Professional										
Substantial Completion:		FY 2028	<input checked="" type="checkbox"/> Capitalized	<input checked="" type="checkbox"/> Expensed									
BUDGET*	TOTAL	PREVIOUS	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
Planning/Permitting/PER	\$ 1,360,000	\$ 360,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ -	
Engineering/Design	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Construction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
CPS, CM&I, and CMT	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Land Acquisition	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Equipment Purchase	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total	\$ 1,360,000	\$ 360,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ -	

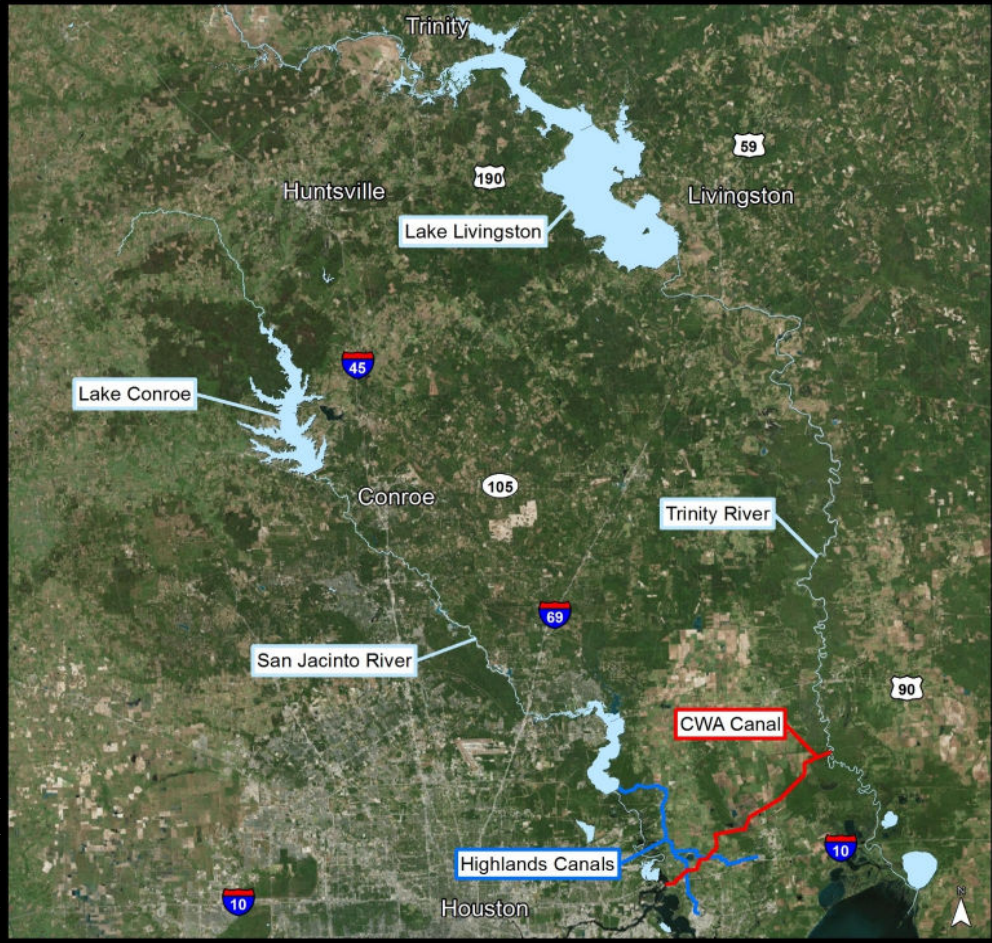
*Budget includes contingency.

PROJECT NAME				PROJECT ID		FISCAL YEAR		DIVISION				
Raw Water Rate Study				RWRSY		2023/2028/2033		Raw Water Enterprise				
PROJECT DESCRIPTION				PROJECT MAP/PICTURE								
<p>In Fiscal Year 2018, SJRA completed a Raw Water Rate Study in order to determine a range of anticipated future raw water rates needed to fund operations, maintenance, and future rehabilitation / improvements to its infrastructure. This project provides for the development of updated rate studies and model(s) on a 5-year recurring cycle. These efforts will help SJRA properly set future raw water rates to continue providing a sufficient and reliable supply of raw water meeting the current and future demands of its customers, and will ensure compliance with contractual requirements.</p>												
PROJECT SCHEDULE			DELIVERY	FUNDING								
Initiate Cons. Selection:		Completed/FY 27/FY 32	<input type="checkbox"/> CSP	<input checked="" type="checkbox"/> O&M								
PSA/WO Issued:		Completed/FY 27/FY 32	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Bonds								
Final Proposal Docs:		N/A		<input type="checkbox"/> R&R								
Proposals/Bids Received:		N/A		<input type="checkbox"/> Other								
Constr. Contract to Board:		N/A	Professional									
Substantial Completion:		FY 23 - Q4/FY 28/FY 33	<input type="checkbox"/> Capitalized	<input checked="" type="checkbox"/> Expensed								
BUDGET*	TOTAL	PREVIOUS	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Planning/Permitting/PER	\$ 715,142	\$ 168,142	\$ -	\$ -	\$ -	\$ -	\$ 253,000	\$ -	\$ -	\$ -	\$ -	\$ 294,000
Engineering/Design	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Construction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CPS, CM&I, and CMT	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Land Acquisition	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Equipment Purchase	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 715,142	\$ 168,142	\$ -	\$ -	\$ -	\$ -	\$ 253,000	\$ -	\$ -	\$ -	\$ -	\$ 294,000

*Budget includes contingency.

PROJECT NAME				PROJECT ID		FISCAL YEAR		DIVISION					
ASR Aquifer Characterization Study				RASRF		2022-2024		Raw Water Enterprise					
PROJECT DESCRIPTION						PROJECT MAP/PICTURE							
<p>Aquifer Storage and Recovery (ASR) is a water management strategy where groundwater is artificially recharged, increasing the volume of water stored in an aquifer and allowing for subsequent withdrawal at a future date. This strategy is part of the recommended portfolio of future water supply sources for Montgomery County in SJRA's 2018 Raw Water Supply Master Plan (RWSMP). The original source of supply for an ASR project could be surface or groundwater. An ASR strategy developed by SJRA could consider injecting either fully or mildly treated water into the aquifer. The first step in investigating ASR as a strategy is an aquifer characterization study.</p> <p>These study efforts (FY2022-24) are being performed by the Texas Water Development Board (TWDB) at no cost to SJRA, and are anticipated to include, but not necessarily be limited to: detailed aquifer characterization of the Gulf Coast Aquifer in SJRA's service area, analysis from the Statewide ASR Suitability Survey, and site selection considerations and suggestions based on hydrogeology.</p> <p>The feasibility and necessity of future efforts will be determined by this study and the results of RWSMP updates (see Project Sheet RWSMP).</p>													
PROJECT SCHEDULE				DELIVERY		FUNDING							
Initiate Cons. Selection:		N/A		<input type="checkbox"/> CSP		<input type="checkbox"/> O&M							
PSA/WO Issued:		N/A		<input checked="" type="checkbox"/> Other		<input type="checkbox"/> Bonds							
Final Proposal Docs:		N/A				<input type="checkbox"/> R&R							
Proposals/Bids Received:		N/A				<input checked="" type="checkbox"/> Other							
Constr. Contract to Board:		N/A		Professional		TWDB							
Substantial Completion:		FY 2024 - Q2		<input type="checkbox"/> Capitalized		<input checked="" type="checkbox"/> Expensed							
BUDGET*	TOTAL	PREVIOUS	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
Planning/Permitting/PER	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Engineering/Design	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Construction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
CPS, CM&I, and CMT	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Land Acquisition	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Equipment Purchase	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

*Budget includes contingency.

PROJECT NAME				PROJECT ID		FISCAL YEAR			DIVISION				
Trinity River Transfer				RTRIT		2023-Beyond 2033			Raw Water Enterprise				
PROJECT DESCRIPTION						PROJECT MAP/PICTURE							
<p>Acquiring water from the Trinity River Authority (TRA) was a recommended strategy in SJRA's 2018 Raw Water Supply Master Plan (RWSMP). This project includes the legal and permitting services necessary to obtain 25,000 ac-ft of water annually to meet anticipated East Harris County customer needs.</p> <p>This strategy was previously anticipated to be needed in SJRA's Montgomery County Service Area. This strategy is being modified due to the uncertainty of groundwater regulations in Montgomery County and anticipated needs in East Harris County.</p> <p>It is now estimated the water will be needed in SJRA's Highlands service area (East Harris County) and transferred via a Coastal Water Authority (CWA) canal. SJRA currently contracts with CWA for conveyance of up to 50 million gallons per day. This strategy may require some infrastructure enhancements. Results of updates to the RWSMP (see Project Sheet RWSMP) and coordination with TRA and CWA could impact the cost, schedule, and/or scope of these efforts.</p> <p>This sheet also includes costs related to contracting with TRA. These costs include an option fee (5% of water rate cost) estimated to run through SJRA Fiscal Year 2026, and then a water reservation fee (50% of water rate cost) for the remainder of the 10-year project planning period. The reservation fee would continue beyond FY 2033 until SJRA begins to take water.</p>													
PROJECT SCHEDULE				DELIVERY	FUNDING								
Initiate Cons. Selection:		Completed	<input type="checkbox"/> CSP	<input checked="" type="checkbox"/> O&M									
PSA/WO Issued:		N/A	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Bonds									
Final Proposal Docs:		N/A		<input type="checkbox"/> R&R									
Proposals/Bids Received:		N/A		<input type="checkbox"/> Other									
Constr. Contract to Board:		N/A	Professional										
Substantial Completion:		TBD	<input checked="" type="checkbox"/> Capitalized	<input checked="" type="checkbox"/> Expensed									
BUDGET*	TOTAL	PREVIOUS	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
Option Fee	\$ 950,000	\$ 237,500	\$ 237,500	\$ 237,500	\$ 237,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Legal/Permitting	\$ 145,000	\$ 47,000	\$ 48,000	\$ 25,000	\$ 25,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Water Sales Contract	\$ 8,312,500	\$ -	\$ -	\$ -	\$ -	\$ 1,187,500	\$ 1,187,500	\$ 1,187,500	\$ 1,187,500	\$ 1,187,500	\$ 1,187,500	\$ 1,187,500	
Total	\$ 9,407,500	\$ 284,500	\$ 285,500	\$ 262,500	\$ 262,500	\$ 1,187,500	\$ 1,187,500	\$ 1,187,500	\$ 1,187,500	\$ 1,187,500	\$ 1,187,500	\$ 1,187,500	

*Budget includes contingency.