



GRP Review Committee Meeting

August 21, 2023

Item 1

Call to Order

Item 2

Public Comments

Item 3

Approval of Minutes

Item 4

GRP Division Updates

FY2023 Surface Water Allocations*

Participant Name	FY23 Allocation	FY23 Actual	% used	% remaining	FY23 Remaining
City of Conroe	1,413,420,000	1,185,852,000	84%	16%	227,568,000
City of Oak Ridge North	43,993,000	51,730,000	118%	-18%	(7,737,000)
MUD 99	123,382,000	81,685,000	66%	34%	41,697,000
MSEC	290,971,000	76,609,000	26%	74%	214,362,000
Rayford Road MUD	133,400,000	94,961,000	71%	29%	38,439,000
San Jacinto River Authority	2,830,803,000	2,631,349,000	93%	7%	199,454,000
Southern Montgomery County MUD	139,621,000	144,954,000	104%	-4%	(5,333,000)
Total	4,975,590,000	4,267,140,000	86%	14%	708,450,000

*Numbers current as of 8/13/2023. FY23 Remaining applies to 8/14/2023 – 8/31/2023.

July 10th State of the County with Judge Keough

July 12th Tour: FNI Summer Interns



July 26th Tour: City of Conroe Interns



July 28th Tour: Bleyl Engineering Interns

Process Water Recovery Basins Lining Improvements

Month in Review:

- Demolition of Northern Basin
- Rebar Placement and Formwork
- Concrete Placement



Construction Amount: \$2,348,897.50

Contractor: Kean Construction, LLC

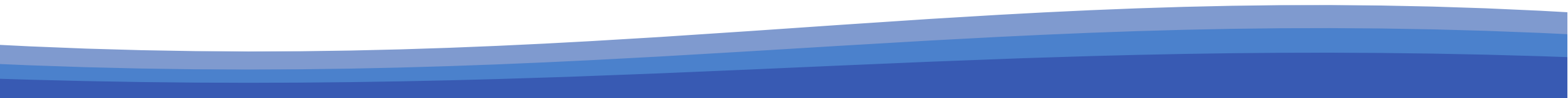
Notice to Proceed: May 22, 2023

Final Completion: December 18, 2023

Item 5

Discuss Recommendation from Review Committee member to engage an operational efficiency consultant

Studies / Audits Conducted

- Sunset Audit (External)
 - 2020 & 2022
 - Focus on policies & practices for SJRA
 - Annual Financial Audit (External)
 - Annual
 - Evaluation of internal controls, including corporate governance and accounting processes
 - Rate Studies
 - 2014 & 2019
 - 2023/2024 Rate Study contract to go to the Board for approval August
 - SCADA / Operations (External)
 - 2023
 - Focus on improving efficiency through use of SCADA
 - Pretreatment Optimization Study (External)
 - 2022
 - Focused on cost reduction on pretreatment
- 

SWTF Plant Optimization Study (2016)

Study budget - \$675,000

Based on 2016 dollars & 24 MGD Production

- Identified potential savings

• Pretreatment System:	\$ 33,000 / year	Completed
• Blower System:	\$ 262,000 / year	Completed
• GAC Backwash Cycle:	\$ 4,800 / year	Completed
• GAC Bypass Selection (avg. 5%):	\$ 170,000 / year	Not Completed

- Potential future savings

• GAC Procurement	\$ 310,000 / year	Completed
• GAC fines processing	\$ 1,000,000 / year*	Not Completed

*Requires capital expenditure of \$1.5M

GAC Bypass Selection - *Not Completed*

This item would allow some of the treated potable water to bypass GAC treatment and be mixed with treated potable water that did have GAC treatment.

After implementing this strategy, surface water receivers complained of taste & odor issues and the GRP Review Committee instructed all flow to go through GAC.

Bypass Percent	Total Volume Treated (MG)	Days to 80% Breakthrough	Yearly Change-outs	Media Change Frequency (Weeks)	Annual Savings
0%	6,919	288	1.27	5.1	\$0
5%	7,283	303	1.20	5.4	\$170,000
10%	7,688	320	1.14	5.7	\$342,350
15%	8,140	339	1.08	6.0	\$513,550
20%	8,649	360	1.01	6.4	\$684,700
25%	9,226	384	0.95	6.8	\$855,900
30%	9,884	412	0.89	7.3	\$1,027,100

GAC Fines Handling

Not Completed



GAC Fines - Small particles of carbon called carbon "fines" are normal to be present in a new GAC filter when it is first installed.

- **Construct basin to reduce GAC Fines Process**
 - Reduces GAC replacement time and cost
 - Additional Savings: \$1,000,000 / year
- **Required capital expenditure of \$1.5M (in 2016 \$)**

Efficiency Projects

Item	Total Cost	Est. cost savings (year)	Reason / Description	Comment
Creation of Utility Enterprise 2020	\$0	~\$120,000	Share a common management group between Woodlands & GRP	On average, 40% of management time is charged to GRP instead of previously charged 100%. Savings includes salary and benefits.
Reorganization of GRP Operators 2022	\$0	\$0	Adjusted staffing from five Lead Operators to two.	Streamlined operations decision making to remove night shift Lead Operators.
GAC fines handling (planned for 2024)	\$100,000	\$177,691 each \$710,765 year	Purchase equipment to conduct handling of GAC fines internally	Night shift Operators will handle GAC fines processing with one additional staff member. (GAC fines handling conducted quarterly).
SCADA / Operations	\$53,884	TBD	Conducting an overall audit of SCADA implementation at GRP to determine how to improve operations through SCADA.	Audit underway with a completion date on 10.1.23.
Pretreatment Optimization Study	\$64,197	\$0	Conducted a study to see if different chemicals could be utilized to reduce cost and improve GAC lifespan.	Study showed no cost savings but a potential improvement on TOC removal. No further action taken due to lack of cost savings.

SWTF Efficiency Projects

Item	Total Cost	Est. cost savings (year)	Reason / Description	Comment
BOD scalping plant TBD	\$2,900,000	\$200,000 (at 2023 rates)	Treat process water onsite to remove BOD and return to SWTF	Conducting feasibility study in FY2024 to determine O&M costs and useful life of equipment
High-service Variable Frequency Drives (VFD) TBD	Under review	~\$63,000/year	Switch-out sole source Rockwell VFDs for non-sole sourced VFDs	Current VFDs require sole source and an annual maintenance contract.
Maintenance contracts	\$0	~\$150,000/year	Some equipment have maintenance contracts to maintain warranties.	Generators, blowers and air compressors currently have outside maintenance contracts to maintain warranties. With warranties expiring, these services are being evaluated to be done in-house.

Additional efforts

- Removing sole source items such as air conditioners
- Consolidating service providers
- Purchasing equipment to conduct more in-house repairs

Additional efforts

- Chemical adjustment savings ~\$75,000/year
- Process water basin cleaning savings ~\$32,000/year
- Utilized insurance for line breaks

Efficiency Consultant

- Actual scope, cost and duration - TBD
- Similar to 2016 HDR Study
- Likely two consultants/one contract;
(Operational/Engineering & Administrative)
- Identification of enhancements to maximize performance and reduce operating cost for:
 - Operations
 - SWTF Process (infrastructure)
 - Staffing (Direct)

Estimated cost
\$300k-500k

Duration
12-18 months

Item 6
Present and Consider FY24 GRP Rate
Study and Model Update

GRP Rate Study and Model Update

- Per GRP Contract a Rate Study is to be completed every 5 years
- RFQ was conducted and Carollo Engineering was selected
- Study cost \$204,922
- Estimated Completion date March 2024



Board Communication

Item No.	Agenda Item	Date
5m	Consider authorizing the Acting General Manager to execute Work Order No. 3 for the Groundwater Reduction Plan (GRP) Division Rate Study and Model Update.	08/24/2023
BACKGROUND INFORMATION		
Firm Name:	Carollo Engineers, Inc.	
Project:	Groundwater Reduction Plan (GRP) Division Rate Study and Model Update.	
Type of Services:	Professional Services	
Type of Agreement:	Master Professional Services Agreement (Contract No. 23-0008-A)	
Project Description:	<p>The GRP Division proposes to conduct a rate study and rate model update to determine the level of required future annual revenue to support the operations, maintenance, repair, rehabilitation, replacement, and capital improvement of the surface water treatment facility and delivery system ("GRP System"). The Study will provide for the review and design of GRP rates to meet those revenue requirements for the ten-year period beginning September 1, 2024, and ending August 31, 2033, representing SJRA FY2025 through FY2034, and will provide an updated rate model suitable to address the identified variables and uncertainties required by SJRA. Work Order No. 3 provides for all labor, materials, and equipment necessary for a consultant to perform the rate study and model development due for completion in CY2024.</p>	
Key Deliverable(s):	Due Date(s):	
Final Rate Model	Within 207 calendar days of NTP	
Final Model Users' Manual	Within 207 calendar days of NTP	
Final Report	Within 207 calendar days of NTP	
Type of Compensation/Amount:	Cost Plus Multiplier with Not-to-Exceed/\$204,922	
Total Amount:	\$204,922.00	
Anticipated Completion Date:	March 31, 2024	
STRATEGIC GOAL:	Goal 2: Operational Excellence	
FUNDING SOURCE:	Cash	
ATTACHMENTS:	Work Order No. 3, Scope, Level of Effort, Schedule	
RECOMMENDED ACTION		
Authorize the Acting General Manager to execute Work Order No. 3 for the Groundwater Reduction Plan (GRP) Division Rate Study and Model Update in an amount not to exceed \$204,922.00 with Carollo Engineers, Inc.		

Item 7
Lone Star Groundwater Conservation
District Report

Item 8
GRP items for consideration by the
SJRA Board of Directors on August 24, 2023

Item 9

Attorney's Update

Item 10
Future GRP Review Committee Meeting
Agenda Items

Item 11
Future Meeting Schedule

Monday, September 25, 2023

Item 12 Adjourn