



## **GROUNDWATER REDUCTION PLAN PROGRAM**

### **Monthly Progress Report—July, 2015**





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# ACRONYMS AND DEFINITIONS

## ACRONYMS

CA&I	Construction Administration and Inspection
CCT	Construction Communication Team
CIP	Capital Improvement Project
CM&I	Construction Management and Inspection
CMAR	Construction Manager At Risk
CMT	Construction Materials Testing
CSB / P	Competitive Sealed Bid / Proposal
EA	Environmental Assessment
EAC	Estimate At Completion
FONCS	Fiber Optics Network Communication System
GIS	Geographic Information System
GRP	Groundwater Reduction Plan
GST	Groundwater Storage Tank
HSPS	High Speed Pump Station
LSGCD	Lone Star Groundwater Conservation District
LVGU	Large Volume Groundwater User
NTP	Notice To Proceed
PER	Preliminary Engineering Report
PMP	Program Management Plan
PVC	Polyvinyl Chloride
PSA	Professional Services Agreement
QA	Quality Assurance
RCCP	Reinforced Concrete Cylinder Pipe
RFB / Q / P	Request For Bids / Qualifications / Proposals
RWI / RWPS	Raw Water Intake / Raw Water Pump Station
SJRA	San Jacinto River Authority
SOQ	Statement of Qualifications
SWF	Surface Water Facilities (SWTP, HSPH and RWI)
SWRF	Surface Water Receiving Facilities
SWTP	Surface Water Treatment Plant
TCEQ	Texas Commission on Environmental Quality

## DEFINITIONS

<b>TWDB</b>	Texas Water Development Board
<b>TXDOT</b>	Texas Department of Transportation
<b>WIF</b>	Water Infrastructure Fund
<b>GROUNDWATER REDUCTION PLAN (GRP)</b>	The document developed and filed with the LSGCD indicating SJRA's plan to reduce the permitted 2009 groundwater pumpage of its GRP Participants by 30%. The GRP is administered by the SJRA, including any supplements, revisions, or amendments.
<b>GRP PROGRAM TEAM</b>	SJRA staff, Program Management Consultant (Brown & Gay Engineers, Inc.) staff, and technical consultants working interdependently toward meeting the goals of the Groundwater Reduction Plan.
<b>GRP ADMINISTRATOR</b>	The SJRA General Manager's designee who administers the SJRA Groundwater Reduction Plan and GRP Contract with GRP Participants.
<b>GRP CONTRACT</b>	Contract between the SJRA and a Participant to be included in the SJRA's efforts to meet the surface water conversion requirements mandated by the LSGCD.
<b>GRP EXTENSION PROJECTS</b>	Safe harbor related projects not related to Phase 1, but tracked independently of Phase 1.
<b>JOINT GRP</b>	GRP which is prepared to include (takes into account) LVGUs who have executed a GRP Contract with the SJRA to join the SJRA's GRP. Contracted LVGUs obtain LSGCD groundwater reduction regulation compliance through the SJRA's Joint GRP without preparing and submitting a GRP.
<b>LARGE VOLUME GROUNDWATER USER(S) (LVGU)</b>	Any person or entity that, through a single well or a combination of wells, actually produces or is authorized by permit(s) issued by the LSGCD to produce 10 million gallons or more of groundwater annually on or after January 1, 2008.
<b>PARTICIPANT(S)</b>	Regulated User(s) that enters into and remains subject to a written agreement with the SJRA to be included in the SJRA's GRP and includes the legal successors or assigns of Participant(s).
<b>REGULATED USER(S)</b>	Any public or private entity or person that is or becomes subject to the District Regulatory Plan established by the LSGCD and includes any amendments, revisions or supplements thereto as may be adopted by the LSGCD.
<b>SJRA GRP DIVISION</b>	Division of the SJRA responsible for GRP compliance, and the management, administration, operation and maintenance of the surface water facilities and surface water transmission system.





## 1.0 PLANNING

The GRP Program Team meets regularly for the purposes of setting performance expectations and goals of the GRP Program, identifying the efforts required to achieve these objectives, evaluating the effectiveness of such efforts, and modifying those efforts based upon both internal and external performance evaluations.

### 1.1 STRATEGIC

During July, the GRP Program Team continued closing out contracts on construction as they reach final completion. Work began on plans to begin final cleaning and disinfection of the water transmission lines .

### 1.2 ENGINEERING AND CONSTRUCTION

All procurement services for construction proposals for Phase I, have been completed and sixteen transmission line construction contracts have been awarded. The engineering consultants will continue to provide construction phase services by reviewing submittals and requests for information as work proceeds.

### 1.3 MEETINGS

Various meetings continued this month with the GRP Program Team. A listing of these meetings is attached as **Exhibit 8.**



*Access gate installed adjacent to the Operations Building*

## 2.0 PROJECT ACTIVITIES

Currently, the GRP Program remains on schedule for the delivery of treated surface water to select Joint GRP Participants on or before January 1, 2016. A simplified GRP Program schedule of remaining work can be found in attached **Exhibit 1.**

### 2.1 ENGINEERING

#### **SURFACE WATER TRANSMISSION SYSTEM**

**Construction Management and Inspection (CM&I)** – The CM&I consultant provided management and inspection services for Transmission Segments T1, T3, W1A, W3B, W3D, C2, WRF-N, WRF-S, and the Standpipe.

**Construction Materials Testing Consultant (CMT)** - CMT consultants are currently working with CM&I staff to perform industry standard construction materials testing on remaining projects.

#### **SURFACE WATER FACILITIES**

**Permanent Access Road** - Contractor began site preparation for temporary bypass access road and set survey controls for the southern boulevard section. Consultant completed Migratory Bird Survey and was authorized to proceed with tree clearing.

Access Road Totals	Progress To Date
Total Contracted Amount	\$5,446,776.50
Total Invoiced To Date	\$312,708.75
Total % Complete Based on Invoice Amount	6.0%

**Construction Administration and Inspection (CA&I)** – The CA&I consultant for the SWF is currently working with the CMAR and SJRA staff to review submittals and RFI's, and provide constant field monitoring and inspection of the systems being installed.

**Construction Materials Testing Consultant (CMT)** - The CMT consultant for the SWF is currently working with the CMAR and CA&I staff to perform industry standard construction materials testing on remaining work.

### 2.2 STATE AGENCY COORDINATION

The Texas Water Development Board (TWDB) completed the field inspection of the Surface Water Facilities and Transmission Line construction sites on May 28, 2015 and The next site visits are scheduled to occur in September, 2015. TWDB approved the project closeout change orders for Transmission Line Segments T2, W1B, W2A, W2B, W3A, and W4. SJRA forwarded close out documentation and requested release of construction retainage to TWDB for Transmission Line Segment C1A. SJRA also forwarded plans and specifications for Transmission Line Segment W3D to TWDB to determine eligibility for funding from existing bond resources.



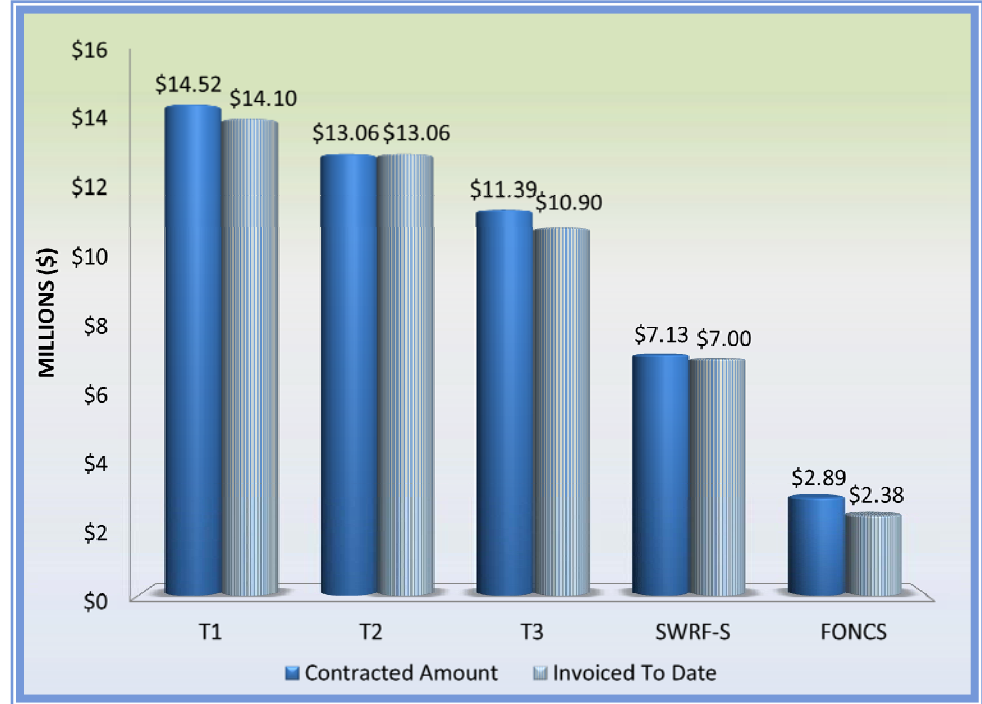
*Workers paving site with asphalt at the Standpipe*

## 2.0 PROJECT ACTIVITIES (CONTINUED)

### 2.3 SURFACE WATER TRANSMISSION SYSTEM PROJECT DATA

The month of July concluded with the installation of approximately 279,662 feet or 52.96 miles of various sized concrete coated steel pipe, PVC pipe, and bar wrapped concrete mortar pipe along the majority of the transmission line segments. This represents approximately 99.9% of the total planned pipe to be installed throughout Montgomery County on or before January 1, 2016. The following graphs and charts show the progress of Transmission Line Segments T1, T2, T3, W1A, W1B, W2A, W2B, W3A, W3B, W3D, W4, C1A, C1B, C2, C3, C4, Surface Water Transmission North Water Receiving Facilities (SWRF-N), Surface Water Transmission South Water Receiving Facilities (SWRF-S), Standpipe, and Fiber Optics Network Communication System (FONCS) thus far.

*Air compressor system installed in the Maintenance Building*



Surface Water Transmission System Total	Progress To Date
Total Contracted Amount	\$146,732,292.63
Total Invoiced To Date	\$142,763,501.78
Total % Complete Based on Invoice Amount	97%

Segment	T1	T2	T3	SWRF-S	FONCS
Contracted Amount	\$14,521,937.14	\$13,061,258.36	\$11,393,193.97	\$7,127,383.00	\$2,885,432.35
Invoiced To Date	\$14,097,492.64	\$13,061,258.36	\$10,896,199.05	\$7,003,726.57	\$2,377,263.90
% Complete	97%	100%	96%	98%	82%

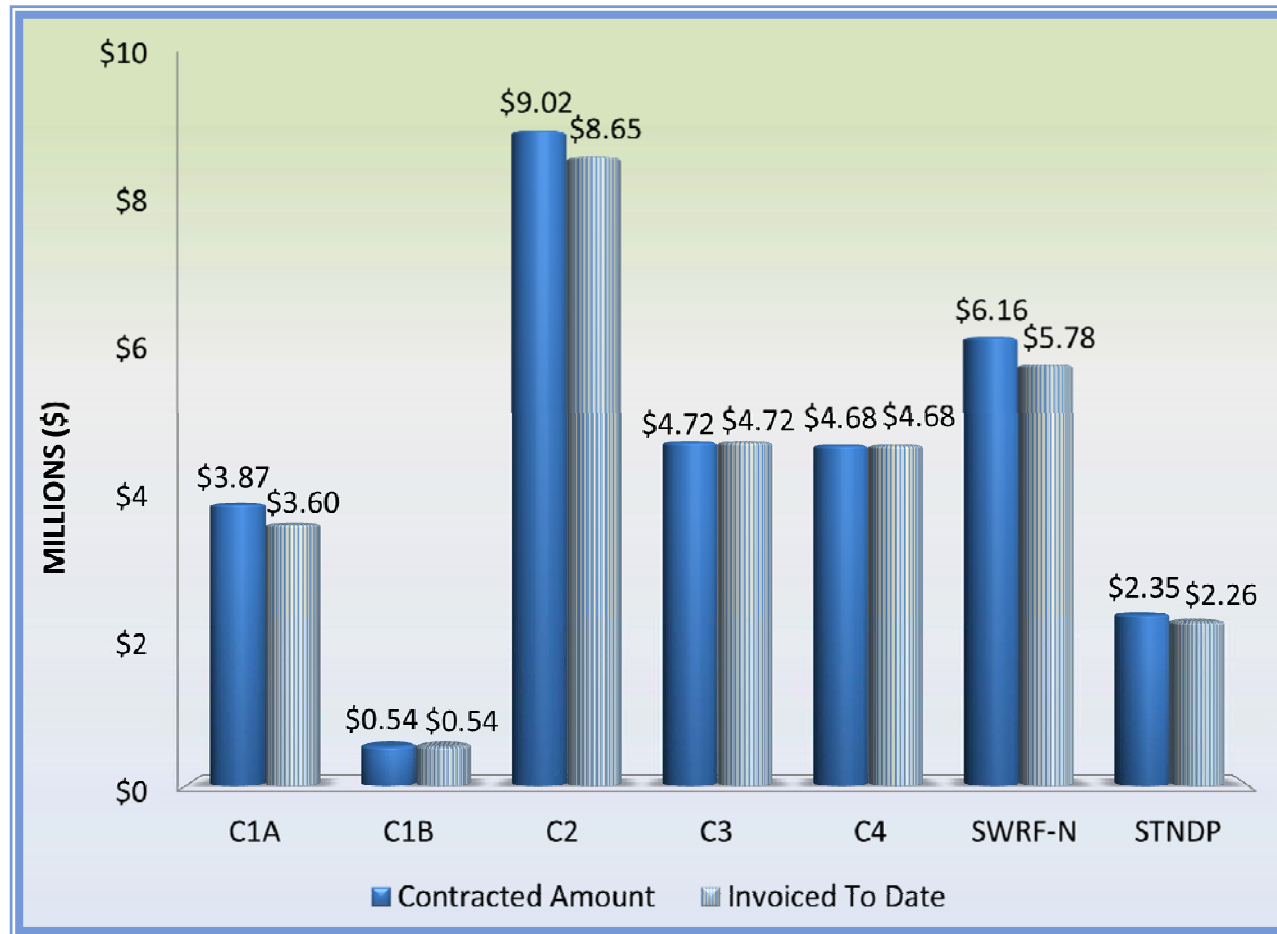
## 2.0 PROJECT ACTIVITIES (CONTINUED)



Segment	W1A	W1B	W2A	W2B	W3A	W3B	W3D	W4
Contracted Amount	\$8,177,136.35	\$6,770,500.90	\$15,351,286.22	\$15,049,920.49	\$7,685,037.50	\$8,114,716.70	\$1,840,986.00	\$3,404,824.67
Invoiced To Date	\$7,841,004.95	\$6,770,500.90	\$15,351,286.22	\$15,049,920.49	\$7,685,037.50	\$7,743,724.93	\$1,244,532.58	\$3,404,824.67
% Complete	96%	100%	100%	100%	100%	95%	68%	100%

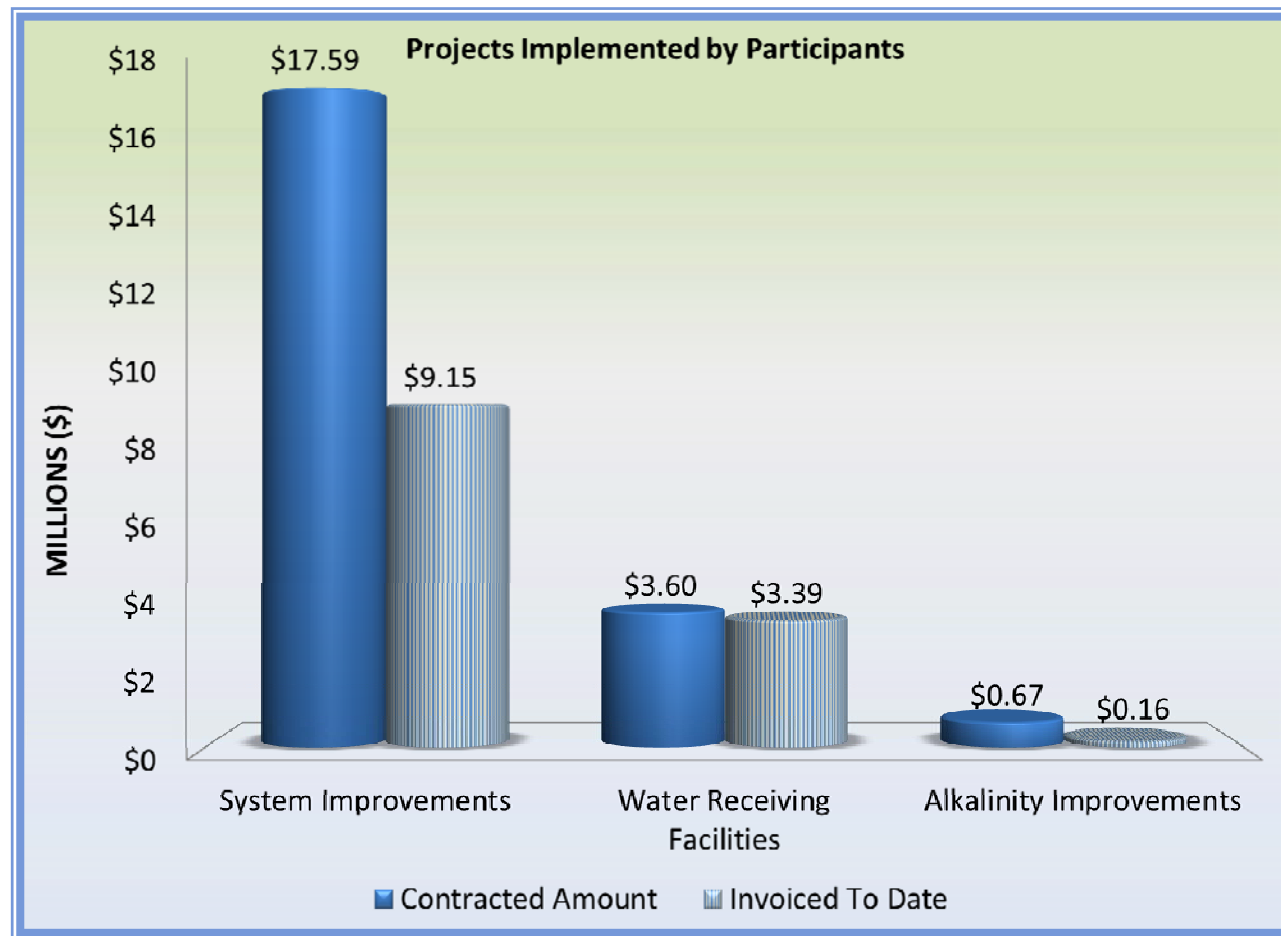


## 2.0 PROJECT ACTIVITIES (CONTINUED)



Segment	C1A	C1B	C2	C3	C4	SWRF-N	STANDPIPE
Contracted Amount	\$3,869,767.26	\$544,393.60	\$9,015,577.30	\$4,720,966.14	\$4,683,615.13	\$6,160,184.55	\$2,354,175.00
Invoiced To Date	\$3,596,844.75	\$544,393.60	\$8,653,034.80	\$4,720,966.14	\$4,683,615.13	\$5,781,672.60	\$2,255,902.00
% Complete	93%	100%	96%	100%	100%	94%	96%

## 2.0 PROJECT ACTIVITIES (CONTINUED)



Project	System Improvements	Water Receiving Facilities	Alkalinity Improvements
Contracted Amount	\$17,593,931.55	\$3,603,916.98	\$674,997.00
Invoiced To Date	\$9,148,234.85	\$3,388,806.97	\$164,669.00
% Complete	52%	94%	24%

## 2.0 PROJECT ACTIVITIES (CONTINUED)

### 2.4 SURFACE WATER TRANSMISSION SYSTEM CONSTRUCTION PROGRESS

Significant progress continues to be made each month with regard to pipe installation on each of the sixteen Surface Water Transmission Line Segments. The table below represents the overall pipe installation statistics through the month of July.

Transmission Line System Pipe Installation Statistics to Date	
Total Piping Installed to Date	52.96 miles
Total % of Pipe Installed to Date	99.9%

**Segment T1** - Contractor continues to address final completion items.

**Segment T3** - Contractor completed all hydrostatic pressure tests on Section Nos. 4 and 5. Contractor completed grouting and dressing the interior side of the manholes. Contractor continued site restoration and miscellaneous activities throughout the segment. Contractor mobilized onsite and began horizontal directional drill (HDD) for the fiber optic conduit.

**Segment W3A** - Contractor continued to finalize close-out documents.

**Segment W3B** - Contractor continued addressing substantial completion punchlist items.

**Segment W3D** - Contractor continued to install 16-inch PVC pipe along Maplewood near Southern Montgomery County MUD Water Plant No. 3. Contractor continued to work on manholes and site restoration. Contractor received approval to crossover pipeline and proceeded with installation.

**Segment C2** - Contractor continued to address substantial completion punchlist items.

**Standpipe** - Contractor completed asphalt pavement.

**Fiber Optic Communications System** - Contractor completed Segment C1A of the Operations Building fiber optic cable install. Work was completed on Segment W3B and work began on Segment C2.

### SURFACE WATER RECEIVING FACILITIES

**Surface Water Receiving Facilities - North** - No new activity. Awaiting the delivery of water from the Surface Water Facility.

**Surface Water Receiving Facilities - South** - Contractor continues to address substantial completion punchlist items.



**Workers and staff accepting delivery of coagulant**

## 2.0 PROJECT ACTIVITIES (CONTINUED)



*Punchlist inspection with SJRA staff and Engineers of Record*

### 2.5 SURFACE WATER FACILITY CONSTRUCTION PROGRESS AND PROJECT DATA

Contractor continued with electrical, yard piping, security, chemical coating, and general completion activities. The majority of the work included electrical installations, trouble-shooting, pavement, chemical trench cover installation, perimeter fencing installation, and yard piping activities. Contractor finished disinfection of the Surface Water Facility including chemical systems piping, Ground Storage Tanks, process piping and the plant water system. The chemical systems were brought online and began startup activities. Contractor continued with the pump housing modifications at the High Service Pump Station. Various representatives were onsite to assist with start-up and troubleshooting. Geotest maintained a part time staff at the site and performed all required soils and concrete testing.

Name of Project	Contracted Amount	Invoiced To Date	% Complete Based on Invoice
Surface Water	\$190,704,740.00	\$183,694,355.00	96.3%



**Carbon dioxide (CO<sub>2</sub>) system training for Operations**



## 2.0 PROJECT ACTIVITIES (CONTINUED)

### 2.6 FACILITY IMPROVEMENTS

Various projects are being implemented by GRP Participants on behalf of the GRP. These include system improvements that are required, due to the delivery of surface water to the Participants' water receiving facilities and improvements at their wastewater treatment plants to address differences in alkalinity of surface water based wastewater.

#### SYSTEM IMPROVEMENTS

**Conroe Water Distribution** - A Supplemental Agreement was approved on November 11, 2013 whereby the GRP will reimburse the City of Conroe for water system improvements needed for the distribution of surface water throughout the City's water system. Based on recent discussions with the City of Conroe, the City's improvements are scheduled to be completed in November, 2015. This will delay the completion of flushing and disinfection of the "C" Segments on the GRP water transmission lines. The table below reflects the status of the City's water system improvements:

Water Plant (WP)	Completion Amount
WP No. 6 (Northwest)	45.2%
WP No. 14 (Wedgewood)	4.1%
WP No. 15 (Silver Springs)	1.4%
WP No. 20 (Pollock)	95.7%
WP No. 21 (Little Egypt)	11.3%
WP No. 22 (FM 3083)	12.1%

**16-inch Well Collection Line from Woodlands WW9 and WW10** - Final closeout documents were processed. Project was completed.

**College Park 16-inch Well Collection Line and 12-inch Water Line Loop** - Final closeout documents were processed. Project was completed.

#### WATER RECEIVING FACILITIES

**Oak Ridge North Water Plant** - A site acceptance test was conducted and a punchlist was provided to the Contractor.

**Rayford Road MUD Water Plants** - The Contractor is currently working on punchlist items noted at the walk-through. A final walk-through was scheduled.

**Mid-South Water Plant** - The chlorine analyzer startup was commissioned. The SJRA pressure transmitter and chlorine injection system was installed. The rock driveway, landscaping, and irrigation system were completed.

#### ALKALINITY IMPROVEMENTS

**Woodlands Alkalinity Improvements** - The temporary alkalinity proposal was prepared, and a pre-bid meeting was held this month. Proposals are to be received on August 6, 2015.

**Southern Montgomery County (SMC) MUD** - Approval letter was received from Montgomery County Drainage District No. 6. The City of Houston's comments were addressed. Engineer began addressing comments on plans and specifications that were received from SJRA staff.



Lime delivery and storage at the Chemical Building

## 3.0 PROCUREMENT

### 3.1 SOLICITATIONS

The following advertisements for solicitations occurred for July:

- No solicitations occurred for this month

### 3.2 CONTRACTS/AGREEMENTS/WORK ORDER APPROVALS

The following contracts/agreements/work orders were approved in July:

- No items were presented for recommendation and/or approval

### 3.3 PROCESS AND PROCEDURES

The GRP Program will utilize traditional procurement methods for consultant services and alternative project delivery methods in the procurement of contractor services, if those services are required.

### 3.4 LOOK AHEAD

The following list provides a very general look ahead at known and anticipated GRP Program professional services and construction contractor solicitations, contract awards, agreements, and/or contract/work order amendments. Solicitations may be combined, modified, or canceled, or time frames may be modified as deemed necessary.

- Work order and three amendments to work orders related to the population of Computerized Maintenance Management System (CMMS)
- Amended Rate Order (GRP Participants)

## 4.0 COST REPORT AND FINANCIAL CONSIDERATIONS

### 4.1 GRP PROGRAM AND GRP PROJECT CIP BUDGET(S)

Through this month the GRP Program remains under its construction cost estimate of \$500,000,000 and forecasts continue to indicate it will be completed under budget (see also subsection 4.6 and Exhibit 2). A summary of the GRP Program's CIP budget and cost considerations as reported to the GRP Review Committee and the SJRA Board of Directors is provided as attached Exhibit 2.

A summary of the SJRA GRP Division's Fiscal Year 2015 operating budget (revenue and expenditures) for the month of July is provided as Exhibit 7. The budget includes all normal and customary expenses for operating a utility-based, non-profit business, including debt service, and is developed annually for approval by the SJRA Board of Directors.

The SJRA Board of Directors has authorized bond funding for the GRP Program in the amount of \$552,250,358.49 (Net \$479,746,021.87); see also Exhibit 4). This funding allows the SJRA to secure all of the resources required to perform professional services, construction services, and procure long lead time equipment during the design phase of the GRP Program.

### 4.2 FINANCIAL REPORTS

Exhibit 5 illustrates the funding sources presently applied towards the GRP Program CIP budget.

- 1.) TWDB Water Infrastructure Fund (WIF)
- 2.) The sale of open market Special Project Revenue Bonds, Series 2011
- 3.) TWDB Dfund, Series 2011A
- 4.) TWDB Dfund, Series 2012
- 5.) TWDB Dfund, Series 2012A
- 6.) TWDB Dfund, Series 2013
- 7.) Operating Cash

Contracted commitments are summarized in Table 4.1 for the month of July. The GRP Program's funding and forecasted expenditures are further detailed in attached Exhibits 2, 3, and 4. Please note that financial reports do not include investment income.



## 4.0 COST REPORT AND FINANCIAL CONSIDERATIONS

### 4.3 INVOICES/APPLICATIONS FOR PAYMENT

The tables below represents the GRP Program Consultant Invoices and/or Construction Contractor Applications for Payment paid through the end of the report month (Item F).

Table 4.1 - GRP Program Funding and Contracted Commitments Summary			
	Previous 6/30/2015	July 2015 Activity	Year to Date (Thru 7/31/15)
A. Approved Funding	552,644,410.66	-	552,644,410.66
B. Available Funding After Costs	480,140,074.04	-	480,140,074.04
C. Approved Contracts			
Phase I	475,545,371.18	(117,769.97)	475,427,601.21
Extensions	1,069,835.00	-	1,069,835.00
D. Project Close Out			
Phase I	(2,306,616.51)	-	(2,306,616.51)
Extensions	-	-	-
E. Uncontracted Funding	5,831,484.37	117,769.97	5,949,254.34
F. Invoices Paid *			
Phase I	425,913,584.52	7,845,923.34	433,759,507.86
Extensions	578,666.07	39,398.34	618,064.41
G. Remaining Funds **	53,647,823.45	(7,885,321.68)	45,762,501.77

\*Invoices Paid -Figures reflect actual funds paid out as of period end dates noted.

\*\*Remaining Funds-Excludes net investment income



*Above—Site work at the Pretreatment Facility  
Bottom—Installation of toeboards at the Pretreatment Facility*



## 4.0 COST REPORT AND FINANCIAL CONSIDERATIONS (CONTINUED)

### 4.4 CONTRACT AMENDMENTS AND CHANGE ORDERS

Each of the GRP Program contracts, agreements, and work orders listed in Section 3.2 were presented at the GRP Review Committee and the SJRA Board of Directors meetings in July. The following items were authorized by the SJRA Board of Directors for execution by the SJRA General Manager.

- No items were presented for recommendation and/or approval

Surface Water Transmission System project closeout engineering amendments executed in July, 2015 include:

Line Segment	Contractor / Consultant	SJRA Board Approved Contract Value	Completed Contract Value	Net Change in Contract Value
CONSTRUCTION CONTRACT CHANGE ORDERS				
C1A	Garney	\$3,869,767	\$3,617,293	(\$252,474)
T2	Texas Sterling	\$13,475,718	\$13,061,258	(\$414,460)
ENGINEERING CPS WORK ORDER AMENDMENTS				
C2	Schaumburg & Polk	\$182,329	\$110,785	(\$71,453)

### 4.5 CLAIMS

If and when claims are received, they will be addressed by the GRP Program Team. SJRA reserves the right to withhold certain claims information that is subject to ongoing investigation, pending or threatened litigation, or covered by attorney-client privilege.

### 4.6 CIP CASH FLOW

The GRP Program CIP cash flow through calendar year 2015 reflects known expenditures through this month as seen in Table 4.1. Estimates for future expenditures are included in Exhibit 2. All active and currently identified future GRP Program projects and initiatives are included in the cash flow.

A graph of forecasted monthly expenditures from the referenced cash flow is attached as Exhibit 3.

### 4.7 CIP BUDGET ESTIMATES AT COMPLETION

#### 4.7.1 GRP Program

The **total gross funds** (including capitalized interest) required to execute Phase I of the GRP Program are currently estimated at \$479,746,021.87. Additionally, all current GRP Program contracts, including their respective SJRA Board of Director's approved budgeted amounts are listed in Exhibit 6.

#### 4.7.2 GRP Projects

The GRP Program projects remained within their approved contract budgets this month. Exhibit 6 indicates each active GRP Program project and GRP Program contract.



*Workers paving and addressing site grading throughout Surface Water Facility site*



## 5.0 QUALITY ASSURANCE

### 5.1 FINAL DESIGN

Final design is complete for Surface Water Treatment Plant, Transmission Lines, Standpipe, Fiber Optic Communications Network, Water Receiving Facilities, and permanent access road.

### 5.2 PRE-CONSTRUCTION

There were no pre-construction meetings held in July, 2015.

### 5.3 CONSTRUCTION

Quality Assurance efforts by SJRA construction inspectors, as well as the CA&I consultant continued this month on the SWF project. Virtually every building on the SWF project site is progressing timely toward meeting the established SWF substantial completion date. Quality Assurance efforts include regular visits to the project site to monitor and document observed progress. Similar Quality Assurance efforts by SJRA construction inspectors and the CM&I consultant continued this month on the transmission lines.



*Left—Exterior view of the Maintenance Building  
Above—Interior views of the Maintenance Building*



## 6.0 EXHIBITS

**Exhibit 1**—GRP Program Schedule

**Exhibit 2**—GRP Program Estimate-At-Completion

**Exhibit 3**—GRP Program Monthly Forecasted Expenditures

**Exhibit 4**—GRP Program Fund Data

**Exhibit 5**—Monthly GRP Program Funding Report

**Exhibit 6**—GRP Program Current Authorizations

**Exhibit 7**—GRP Schedule of Revenues & Expenses—Actual & Budget

**Exhibit 8**—GRP Program Monthly Meeting Log

**Exhibit 9**—Surface Water Facilities (SWF) Construction Photos

**Exhibit 10**—Surface Water Standpipe Construction Photos

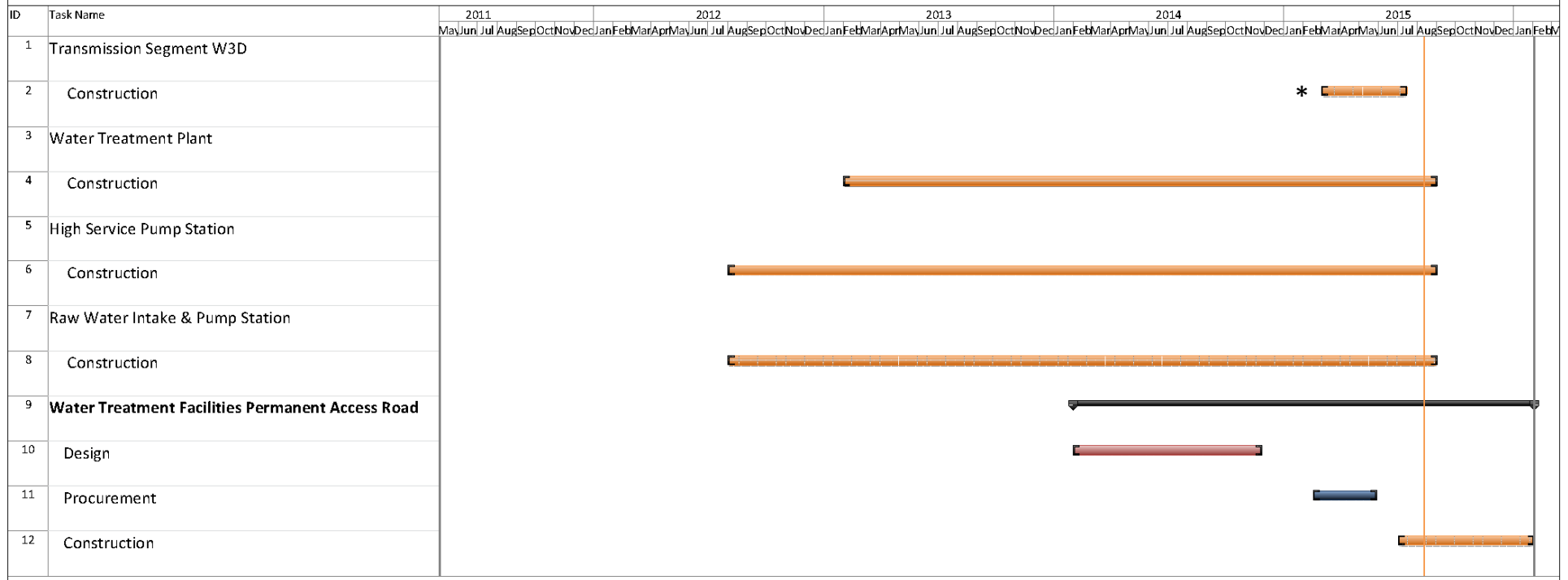
**Exhibit 11**—Supervisory Control and Data Acquisition (SCADA) System Photos

**Exhibit 12**—Facility Improvements by GRP Participants Photos



*Above—Clearing and grading of temporary access road  
Left— Gravel placement on temporary access road*

## Exhibit 1 - GRP Program Schedule



\* Pending work order to increase contract due to weather



## Exhibit 2

### GRP Program Estimate-At-Completion as of July 31, 2015

SERVICES	ESTIMATE-AT-COMPLETION
<b>Pre-Engineering Phase Services</b>	<b>\$ 4,696,451</b>
(GRP Development, Environmental Studies, Pilot Plant, Surface Water Treatment Plant Site Survey)	
<b>Engineering Phase Services</b>	<b>\$ 45,143,592</b>
(Planning, Preliminary Engineering, Final Engineering, Geotechnical, Survey, Metes & Bounds, Subsurface Utility Investigation, Environmental)	
<b>Construction Phase Services</b>	<b>\$ 29,748,586</b>
(Engineering Services During Construction, Construction Management & Inspection [Transmission System], Construction Administration & Inspection [SWF], Material Testing)	
<b>Construction</b>	<b>\$ 376,774,386</b>
(Surface Water Transmission System, Raw Water Intake and Pump Station, Surface Water Treatment Plant, High Service Pump Station and Ground Storage Tanks, Surface Water Receiving Facilities, Infrastructure, Buildings, Roadways, Site Security, Access Roadways)	
Transmission Segment C1 - Construction	\$ 4,414,161
Transmission Segment C2 - Construction	\$ 9,015,577
Transmission Segment C3 - Construction	\$ 4,720,966
Transmission Segment C4 - Construction	\$ 4,683,615
Transmission Segment T1 - Construction	\$ 14,521,937
Transmission Segment T2 - Construction	\$ 13,061,258
Transmission Segment T3 - Construction	\$ 11,593,194
Transmission Segment W1 - Construction	\$ 14,947,637
Transmission Segment W2 - Construction	\$ 30,401,207
Transmission Segment W3 - Construction	\$ 15,799,754
Transmission Segment W4 - Construction	\$ 3,404,825
Transmission System Standpipe	\$ 2,354,175
Receiving Facilities - Construction	\$ 15,039,812
Surface Water Facilities CMAR (GMP)	\$ 190,704,740
Transmission System Fiber Optic - Construction	\$ 2,985,432
Permanent Access Roadway Construction	\$ 5,446,777
Building No. 1; Access Road; Vegetative Buffer; Construction Materials Testing; SWF Site Vegetation Management; Sanitary Sewer/Access Rd. Relocation	\$ 4,469,037
Other Offsite Construction (Transmission Line Utility Relocations, Receiving Facility Improvements)	\$ 28,784,695
Non-Project Specific Contingency	\$ 425,587
<b>Program Management</b>	<b>\$ 10,978,281</b>
(GRP Program Management, Survey, Geotechnical, Transient, Corrosion, Legal Consultants)	
<b>Land Acquisition</b>	<b>\$ 12,404,726</b>
(Legal, Appraisal, Title Research, Land Acquisition Consultants) <sup>(1)</sup>	
<b>Total <sup>(2)</sup></b>	<b>\$ 479,746,022</b>

<sup>(1)</sup> Includes revisions to land acquisition cost estimates, land cost, and recategorizing of contingency.

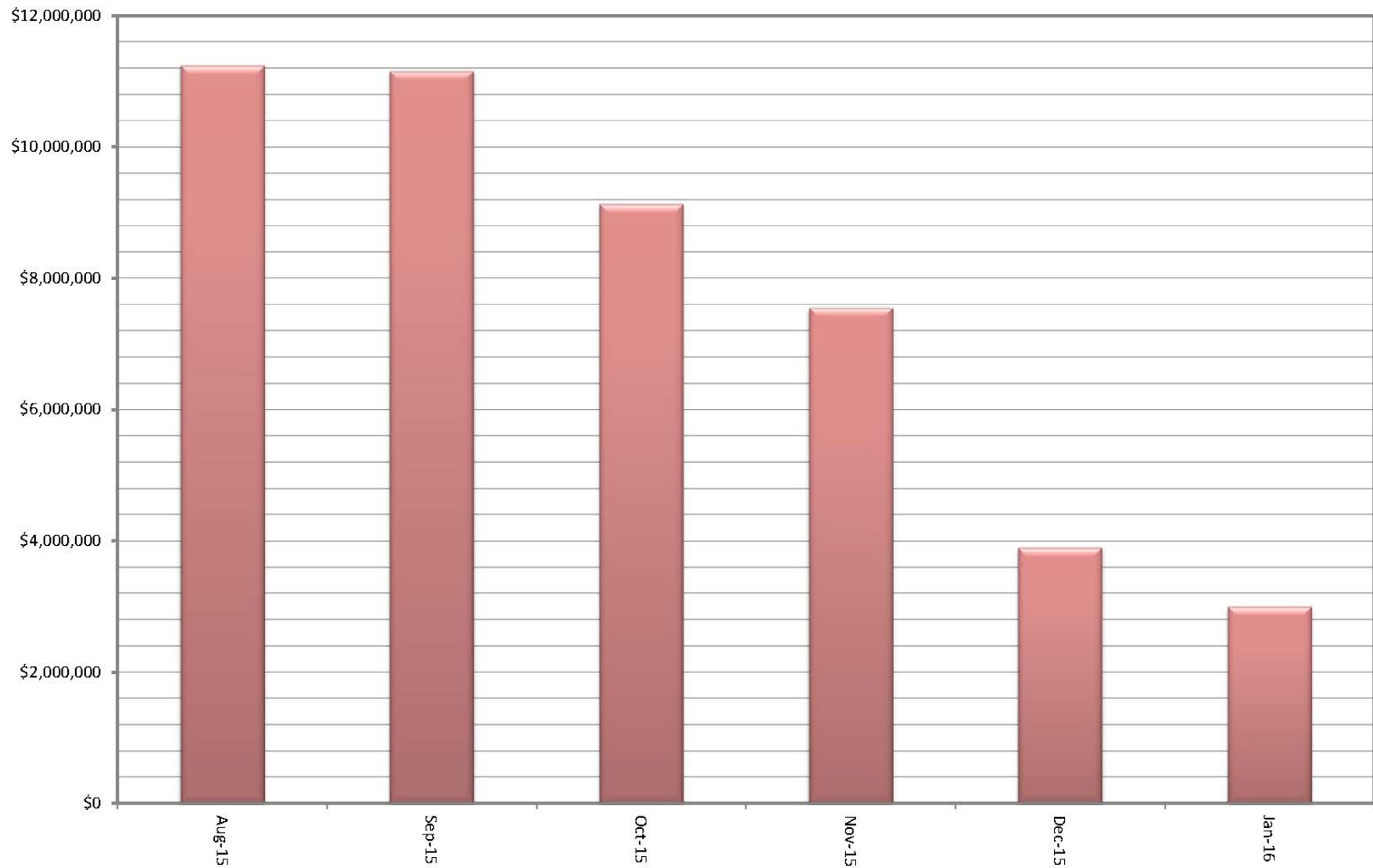
<sup>(2)</sup> Bond issuance costs are not included.





## Exhibit 3

### GRP Program Monthly Forecasted Expenditures as of July 31, 2015



## Exhibit 4

### GRP Program Fund Data as of July 31, 2015

Funding Source	Amount Authorized by Board To-Date	Interest Rate	Bond Costs	Capitalized Interest	Debt Service Reserve Fund	Net Amount Currently Available
TWDB WIF Bond Issue	\$ 21,500,000.00	.854% - 2.706%	\$ 470,337.08	\$ -	\$ -	\$ 21,029,662.92
Open Market Bond Issue (Series 2011)	\$ 83,430,358.49	3% - 5.25%	\$ 2,049,764.39	\$ 7,858,241.52	\$ -	\$ 73,522,352.58
TWDB DFund Series 2011A	\$ 67,470,000.00	1.22% - 4.97%	\$ 751,195.33	\$ 5,166,233.00	\$ 3,859,151.00	\$ 57,693,420.67
TWDB DFund Series 2012	\$ 175,000,000.00	1.17% - 4.62%	\$ 971,769.13	\$ 12,869,175.00	\$ -	\$ 161,159,055.87
TWDB DFund Series 2012A	\$ 165,000,000.00	1.26% - 4.62%	\$ 952,269.99	\$ 14,139,669.00	\$ 16,500,000.00	\$ 133,408,061.01
TWDB Dfund Series 2013	\$ 39,850,000.00	4.50%	\$ 628,750.00	\$ 3,214,292.00	\$ 3,073,489.18	\$ 32,933,468.82
<b>Totals</b>	<b>\$ 552,250,358.49</b>		<b>\$ 5,824,085.92</b>	<b>\$ 43,247,610.52</b>	<b>\$ 23,432,640.18</b>	<b>\$ 479,746,021.87</b>

Notes:

1. These values do not include investment income.
2. Series 2011 bond costs include \$681,132.45 for bond insurance and \$459,709.50 for underwriter's discount.



# Exhibit 5

## Monthly GRP Program Funding Report

### Fiscal Year 2015

### Through July 31, 2015

	TWDB WIF Bond Issue	Open Market Bond Issue (Series 2011)	TWDB Dfund (Series 2011A)	TWDB Dfund (Series 2012)	TWDB Dfund (Series 2012A)	TWDB Dfund (Series 2013)	Operating (Cash)	Contributions from MUDs	Totals
<b>A. Program Budget</b>									
Bond Issue Amount	\$ 21,500,000.00	\$ 83,430,358.49	\$ 67,470,000.00	\$ 175,000,000.00	\$ 165,000,000.00	\$ 39,850,000.00			\$ 552,250,358.49
Operating Funds Commitment							\$ 100,052.17		\$ 100,052.17
Contributions from MUDs								\$ 294,000.00	\$ 294,000.00
<b>Total Investment</b>	<b>\$ 21,500,000.00</b>	<b>\$ 83,430,358.49</b>	<b>\$ 67,470,000.00</b>	<b>\$ 175,000,000.00</b>	<b>\$ 165,000,000.00</b>	<b>\$ 39,850,000.00</b>	<b>\$ 100,052.17</b>	<b>\$ 294,000.00</b>	<b>\$ 552,644,410.66</b>
<b>B. Contracted Costs</b>									
<b>Phase I</b>									
Contracts Completed	\$ 20,426,217.84	\$ 33,434,666.65	\$ 15,359,982.20	\$ -	\$ 57,978,759.07	\$ 19,495,042.00	\$ 16,157.80	\$ -	\$ 146,710,825.56
Current Contract Values	\$ 970,134.76	\$ 27,812,031.00	\$ 41,354,128.88	\$ 161,159,055.87	\$ 76,083,549.20	\$ 14,326,952.10	\$ 83,898.49	\$ -	\$ 321,789,750.30
Change Orders	\$ -	\$ 7,373,176.24	\$ 1,192,864.32	\$ -	\$ (750,515.08)	\$ (888,500.13)	\$ -	\$ -	\$ 6,927,025.35
Project Close Out	\$ (366,689.68)	\$ (1,408,150.68)	\$ (213,554.73)	\$ -	\$ (318,192.15)	\$ (25.15)	\$ (4.12)	\$ -	\$ (2,306,616.51)
<b>Phase I Total:</b>	<b>\$ 21,029,662.92</b>	<b>\$ 67,211,723.21</b>	<b>\$ 57,693,420.67</b>	<b>\$ 161,159,055.87</b>	<b>\$ 132,993,601.04</b>	<b>\$ 32,933,468.82</b>	<b>\$ 100,052.17</b>	<b>\$ -</b>	<b>\$ 473,120,984.70</b>
<b>Extensions</b>									
Contracts Completed	\$ -	\$ 305,698.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 305,698.00
Current Contract Values	\$ -	\$ 764,137.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 764,137.00
Change Orders	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Project Close Out	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Extensions Total:</b>	<b>\$ -</b>	<b>\$ 1,069,835.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,069,835.00</b>
<b>C. Expenditures</b>									
<b>Phase I</b>									
Paid Previous Fiscal Years	\$ 20,599,416.62	\$ 49,618,248.03	\$ 40,595,829.88	\$ 109,374,040.69	\$ 91,422,085.04	\$ 12,922,461.97	\$ 84,942.42	\$ -	\$ 324,617,024.65
Paid Current Fiscal Year	\$ 17,372.50	\$ 10,442,441.56	\$ 12,435,836.04	\$ 38,526,937.28	\$ 31,331,616.23	\$ 16,378,044.70	\$ 10,234.90	\$ -	\$ 109,142,483.21
<b>Phase I Total:</b>	<b>\$ 20,616,789.12</b>	<b>\$ 60,060,689.59</b>	<b>\$ 53,031,665.92</b>	<b>\$ 147,900,977.97</b>	<b>\$ 122,753,701.27</b>	<b>\$ 29,300,506.67</b>	<b>\$ 95,177.32</b>	<b>\$ -</b>	<b>\$ 433,759,507.86</b>
<b>Extensions</b>									
Paid Previous Fiscal Years	\$ -	\$ 172,033.34	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 172,033.34
Paid Current Fiscal Year	\$ -	\$ 446,031.07	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 446,031.07
<b>Extensions Total:</b>	<b>\$ -</b>	<b>\$ 618,064.41</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 618,064.41</b>
Issuance Costs	\$ 470,337.08	\$ 2,049,764.39	\$ 751,195.33	\$ 971,769.13	\$ 952,269.99	\$ 628,750.00	\$ -	\$ -	\$ 5,824,085.92
Debt Service Reserve Fund	\$ -	\$ -	\$ 3,859,151.00	\$ -	\$ 16,500,000.00	\$ 3,073,489.18	\$ -	\$ -	\$ 23,432,640.18
Capitalized Interest	\$ -	\$ 7,858,241.52	\$ 5,166,233.00	\$ 12,869,175.00	\$ 14,139,669.00	\$ 3,214,292.00	\$ -	\$ -	\$ 43,247,610.52
<b>D. Remaining</b>									
Uncontracted Funds	\$ (0.00)	\$ 5,240,794.37	\$ (0.00)	\$ (0.00)	\$ 414,459.97	\$ (0.00)	\$ (0.00)	\$ 294,000.00	\$ 5,949,254.34
Funding Balance *	\$ 412,873.80	\$ 12,843,598.58	\$ 4,661,754.75	\$ 13,258,077.90	\$ 10,654,359.74	\$ 3,632,962.15	\$ 4,874.85	\$ 294,000.00	\$ 45,762,501.77

\*Excluding net investment income



## Exhibit 6

### GRP Program Current Authorizations as of July 31, 2015

#### Surface Water Transmission System - Consultant Services

Project	Firm	Amount Authorized by Board
T1	Jones & Carter	\$ 2,166,221.02
T2	Klotz Associates	\$ 1,822,718.66
T3	Espey	\$ 1,892,282.82
W1	LAN	\$ 2,469,560.65
W2	Binkley & Barfield	\$ 3,306,476.20
W3	Cobb Fendley	\$ 3,854,098.16
W4	LJA	\$ 1,009,006.98
C1	Dannenbaum	\$ 891,000.68
C2	Schaumburg & Polk	\$ 2,211,922.28
C3	Kimley Horn	\$ 1,238,749.53
C4	RG Miller	\$ 597,788.37
Fiber Optic	EMA	\$ 1,062,569.67
WRFs	Malcom Pirnie/Arcadis	\$ 2,680,366.57
CM&I	Kellog Brown & Root	\$ 8,807,135.48
<b>Subtotal - Surface Water Transmission System</b>		<b>\$ 34,009,897.07</b>

#### Surface Water Facilities - Consultant Services

Project	Firm	Amount Authorized by Board
WTP	HDR Engineering	\$ 19,382,334.64
HSPS	AECOM	\$ 5,455,218.39
StandPipe	AECOM	\$ 192,235.38
RWI&PS	Freese & Nichols	\$ 3,929,369.64
CA&I	CDMSmith	\$ 5,632,169.83
<b>Subtotal - Surface Water Facilities</b>		<b>\$ 34,591,327.88</b>

#### Program Consultant Services & Other Projects

Project	Firm	Amount Authorized by Board
Program Management	Brown & Gay	\$ 10,695,226.55
Program Survey	Landtech	\$ 553,621.50
Program Geotechnical	Raba Kistner	\$ 132,768.75
Prog Transient Analyses	AECOM	\$ 5,647,453.77
Access Rd/Misc Service	ACES	\$ 882,366.25
SWF Surveying	S&V Surveying	\$ 66,875.00
Land Acq	KDM	\$ 427,940.62
Land Acq	PAS	\$ 1,150,481.70
Program Environmental	Halff Associates	\$ 1,063,698.87
Program Fiber Optics	EMA	\$ 1,062,569.67
Program Corrosion	V&A Consulting Engineers	\$ 866,676.00
Program Legal Services & Projects	Multiple	\$ 4,832,165.41
<b>Subtotal - Program Consultant Services &amp; Other Projects</b>		<b>\$ 27,381,844.09</b>



## Exhibit 6 (con't)

### GRP Program Current Authorizations as of July 31, 2015

#### Surface Water Transmission System Extensions - Consultant Services

Project	Firm	Amount Authorized by Board
MUD99/115	IDS Engineering Group - x	\$ 470,720.00
MUD99/115	Andrews & Kurth - x	\$ 100,000.00
MUD99/115	PAS - x	\$ 200,000.00
MUD99/115	Arcadis - x	\$ 36,843.00
MUD99/115	V&A Consulting Engineers - x	\$ 41,256.00
MUD99/115	Brown & Gay - x	\$ 121,216.00
<b>Subtotal - Surface Water Transmission System Extensions</b>		<b>\$ 970,035.00</b>

#### Active or Completed Construction Contracts Managed by GRP

Project	Firm	Amount Authorized by Board
GRP Bldg No. 1	Brookstone	\$ 2,008,673.00
Bldg No. 1/Aqua Tx CMT	Aviles Engineering	\$ 64,343.15
Landscape Buffer	Key-Scape Landscape	\$ 53,090.00
Temp Access Road	Lindsey Construction	\$ 977,583.60
Access Road CMT	Terracon Consultants	\$ 10,359.70
Access Road Overlay and Detention	AAA Asphalt	\$ 412,284.59
Access Road Landscape	TreeScapes	\$ 34,165.00
Aqua Texas Sewer	Randy Roan Construction	\$ 547,341.17
Bldg No. 1 Fiber Line	Preferred Technologies	\$ 231,157.56
Surface Water Plant (CMAR)	McCarthy	\$ 190,704,740.00
SWF CMT	Geotest	\$ 2,243,423.65
Transmission Sytem Utility Relocations	Various	\$ 2,062,614.14
Transmission System CMT (T3, W1, W2, W3, W4)	Aviles	\$ 1,851,330.00
Transmission System CMT (T1, T2, C1, C2, C3, C4)	Terracon	\$ 756,711.25
Transmission Segment T1	S.J. Louis Construction of Texas Ltd	\$ 14,521,937.14
Transmission Segment T2	Texas Sterling Construction Company	\$ 13,061,258.36
Transmission Segment T3	S.J. Louis Construction of Texas Ltd	\$ 11,393,193.97
Transmission Segment C1A	Garney Companies, Inc.	\$ 3,869,767.26
Transmission Segment C1B	E.P. Brady, LTD.	\$ 544,393.60
Transmission Segment C2	Garney Companies, Inc.	\$ 9,015,577.30
Transmission Segment C3	E.P. Brady, LTD.	\$ 4,720,966.14
Transmission Segment C4	BRH-Garver Construction, L.P.	\$ 4,683,615.13
Transmission Segment W1A	Huff & Mitchell, Inc.	\$ 8,177,136.35
Transmission Segment W1B	Texas Sterling Construction Company	\$ 6,770,500.90
Transmission Segment W2A	Texas Sterling Construction Company	\$ 15,351,286.22
Transmission Segment W2B	Texas Sterling Construction Company	\$ 15,049,920.49
Transmission Segment W3A	Huff & Mitchell, Inc.	\$ 7,685,037.50



## Exhibit 6 (con't)

### GRP Program Current Authorizations as of July 31, 2015

Project	Firm	Amount Authorized by Board
Transmission Segment W3B	Garney Companies, Inc.	\$ 8,114,716.70
Transmission Segment W3D	Alcott, Inc. (TCH)	\$ 1,840,986.00
Transmission Segment W4	Huff & Mitchell, Inc.	\$ 3,404,824.67
Receiving Facilities South	CSA	\$ 7,127,383.00
Receiving Facilities North	Archer Western	\$ 6,160,184.55
Transmission SCADA - Fiber Optic Construction	Fisk Electric Company	\$ 2,885,432.35
Standpipe	CSA	\$ 2,354,175.00
Permanent Access Road	James Construction	\$ 5,446,776.50
Miscellaneous	Other Construction Contracts, Permits, Fees, etc.	\$ 233,666.23
<b>Subtotal - Construction Contracts</b>		<b>\$ 354,370,552.17</b>

#### Active or Completed Engineering/Construction Contracts Managed by Participants

Project	Participant	Amount Authorized by Board
Distribution and Well Collection Lines	Woodlands Water	\$ 4,641,684.55
Distribution and Water Plants Improvements	City of Conroe Water	\$ 12,952,247.00
Receiving Facilities	Rayford Road MUD Water	\$ 1,752,244.00
Receiving Facilities	City of Oak Ridge North Water	\$ 506,844.00
MSEC Receiving Facility and Distr. System Imp.	MSEC	\$ 1,344,828.98
Wastewater Alkalinity Improvements	Southern Montgomery County MUD Wastewater	\$ 455,975.00
Wastewater Alkalinity Improvements	Woodlands Wastewater	\$ 219,022.00
<b>Subtotal -Engineering/Construction Managed by Participants</b>		<b>\$ 21,872,845.53</b>

#### Totals

	Amount Authorized by Board
Surface Water Transmission System - Consultant Services	\$ 34,009,897.07
Surface Water Facilities - Consultant Services	\$ 34,591,327.88
Program Consultant Services & Other Projects	\$ 27,381,844.09
Surface Water Transmission System Extensions - Consultant Services	\$ 970,035.00
Active or Completed Construction Contracts	\$ 354,370,552.17
Engineering/Construction Managed by Participants	\$ 21,872,845.53
<b>Total</b>	<b>\$ 473,196,501.74</b>

# Exhibit 7

## San Jacinto River Authority

### Groundwater Reduction Plan

#### Schedule of Revenues & Expenses—Actual and Budget

For Eleven Months Ending July 31, 2015

	Jul	Fiscal Year To Date				Fiscal Budget	
	Actual	Actual	Budget	Variance	% Variance	Total Year Budget	Actual YTD % of Total Year Budget
OPERATING REVENUES							
GRP pumping fees	\$ 4,423,202	\$ 32,055,536	\$ 37,882,945	\$ (5,827,409)	(15%)	\$ 41,992,101	76%
GRP Surface Water Sales	-	-	3,359,522	(3,359,522)	(100%)	4,942,463	0%
TOTAL OPERATING REVENUES	\$ 4,423,202	\$ 32,055,536	\$ 41,242,467	\$ (9,186,931)	(22%)	\$ 46,934,564	68%
OPERATING EXPENSES							
Payroll & employee benefit expenses	\$ 539,985	\$ 4,195,938	\$ 4,706,748	\$ 510,810	11%	\$ 5,108,247	82%
Professional fees	16,140	177,446	510,400	332,954	65%	556,800	32%
Purchased & contracted services	12,343	159,046	282,088	123,042	44%	307,732	52%
Supplies, materials & utilities	166,876	1,976,839	6,258,326	4,281,486	68%	6,815,340	29%
Maintenance repairs, parts & rentals	5,359	24,925	90,250	65,325	72%	105,750	24%
Bad debt expense	21,785	21,785	-	(21,785)	100%	-	0%
General & administration	62,450	610,083	867,468	257,385	30%	946,329	64%
TOTAL OPERATING EXPENSES	\$ 824,939	\$ 7,166,063	\$ 12,715,279	\$ 5,549,216	44%	\$ 13,840,198	52%
NON-OPERATING REVENUES & EXPENSES							
Interest on investments	\$ 7,706	\$ 324,507	\$ 183,040	\$ 141,467	77%	\$ 199,680	163%
Other revenues	-	1,950	-	1,950	100%	-	0%
Interest expense	(1,771,877)	(19,483,494)	(19,554,298)	70,804	(0%)	(21,360,309)	91%
TOTAL NON-OPERATING (EXCLUDING ITEMS NOT BUDGETED)	\$ (1,764,171)	\$ (19,157,037)	\$ (19,371,258)	\$ 214,221	(1%)	\$ (21,160,629)	91%
NET INCOME (LOSS) (EXCLUDING ITEMS NOT BUDGETED)	\$ 1,834,092	\$ 5,732,436	\$ 9,155,929	\$ (3,423,493)	(37%)	\$ 11,933,737	48%
NON-OPERATING REVENUES & EXPENSES (NOT BUDGETED)							
Depreciation	\$ (35,274)	\$ (304,859)	\$ -	\$ (304,859)	100%	\$ -	0%
Amortized debt issuance expense	363	(2,515)	-	(2,515)	100%	-	0%
TOTAL NON-OPERATING (NOT BUDGETED)	\$ (34,912)	\$ (307,374)	\$ -	\$ (307,374)	100%	\$ -	0%
NET INCOME (LOSS) (BUDGETED AND NOT BUDGETED)	\$ 1,799,180	\$ 5,425,063	\$ 9,155,929	\$ (3,730,867)	(41%)	\$ 11,933,737	45%



## Exhibit 7 (con't)

### GRP Division

#### Clarification of Actual & Budget Variances

For Eleven Months Ending July 31, 2015

Category	YTD - Driver	July 2015	FYTD 2015
GRP Pumping Fees	Usage variance due to abnormally wet weather conditions and change in consumer behavior. This trend began in FY2014 and has continued if not intensified, into FY2015. If the trend persists, pumpage and surface water rates may be impacted in future fiscal years.	(386)	(9,187)
Payroll and related expenses	Budgeted positions not filled as scheduled.	13	511
Professional Fees	Professional fees less than budgeted.	30	333
Purchased & Contracted Services	Purchased and contracted services less than budgeted.	13	123
Supplies, Materials, Utilities, Maintenance, Repairs, Parts & Rentals	Fuel, office supplies, phones, recruiting and misc. expenses less than budgeted.	7	205
	Chemicals-no usage this month	153	2,015
	Utilities-less than budgeted	68	747
	TRA Reservation Fee less than budgeted	-	62
	COH Reservation Fee less than budgeted	-	908
	SJRA Reservation Fee more than budgeted	(51)	(117)
	SJRA Supply Use Fee less than budgeted	213	462
	Maintenance repairs, parts & rentals expense less than budgeted.	10	65
General & Administration	Allocated labor and related expenses less than budgeted, anticipated a quicker rate of growth than has been actualized.	(5)	236
Non-Operating	Interest/Investment Income	(9)	141
	Other Revenues	-	2
	Bond interest expense	34	71
	Capital Contributions	-	-
	Depreciation expense	(35)	(305)
	Bond Issuance Cost Amort expense	-	(3)
		<b>55</b>	<b>(3,731)</b>





## Exhibit 8

### GRP Program Monthly Meeting Log for July, 2015

Meeting	Subject of Meeting	Location	Date	Participants
Closeout Receiving Facility Discussion	Closeout	GRP Building	7/9/2015	GRP Staff, Engineers, Contractors, and Consultant Team
Wastewater Alkalinity Discussion	Wastewater Alkalinity	GRP Building	7/9/2015	GRP Staff, Engineers, Contractors, and Consultant Team
SCADA Coordination Meeting	SCADA	GRP Building	7/14/2015	SCADA Team, GRP Program Team & Consultant Team
Transmission Line Flushing Team Meeting	Transmission System	GRP Building	7/16/2015	GRP Staff, Engineers, Contractors, and Consultant Team
Access Road Plat Meeting	Access Road	GRP Building	7/17/2015	GRP Staff, Engineers, Contractors, and Consultant Team
GRP Review Committee Meeting	Board Agenda Items	G&A Building	7/20/2015	GRP Review Committee, SJRA Staff, and General Public
SJRA Board of Directors Meeting	Board Agenda Items	G&A Building	7/22/2015	SJRA Board of Directors, SJRA Staff, and General Public
Startup Planning Meeting	Surface Water Facilities	McCarthy Trailer	Daily (Tues.-Fri.)	GRP Staff, Engineers, Contractors, and Consultant Team
CMAR Coordination Meeting	CMAR	GRP Building	Weekly	SJRA Staff, GRP Program Team, and Consultant Team
Construction Administration and Inspection Meetings	Construction	GRP Building	Weekly	SJRA Staff, GRP Program Team, and CA&I Team
Transmission System Coordination Meeting	Transmission System	GRP Building	Weekly	Contractor, SJRA Staff, GRP Program Team, and Consultant Team
Segments W1B, W2A and W2B Progress Meetings	Segments W2B and W3A	GRP Building	Monthly	Contractor, SJRA Staff, GRP Program Team, and Consultant Team
Segment T3 Bi-Weekly Progress Meeting	Segment T3	GRP Building	Bi-Weekly	Contractor, SJRA Staff, GRP Program Team, and Consultant Team
W3C Land Acquisition Meeting	Land Acquisition	GRP Operations Building	Monthly	SJRA Staff, GRP Program Team, Attorneys, and Consultant
Surface Water Facility Progress Meeting	Surface Water Facilities	GRP Building	Bi-Monthly	SJRA Staff, CMAR, CA&I, and Consultant Team



## Surface Water Facilities (SWF) Construction Photos



## EXHIBIT 9 SWF Construction Photos





## EXHIBIT 9 (con't) SWF Construction Photos



❶ Access Road—Subgrade preparation for eastbound boulevard section



## EXHIBIT 9 (con't) SWF Construction Photos



① Access Road—Detention pond clearing and grubbing

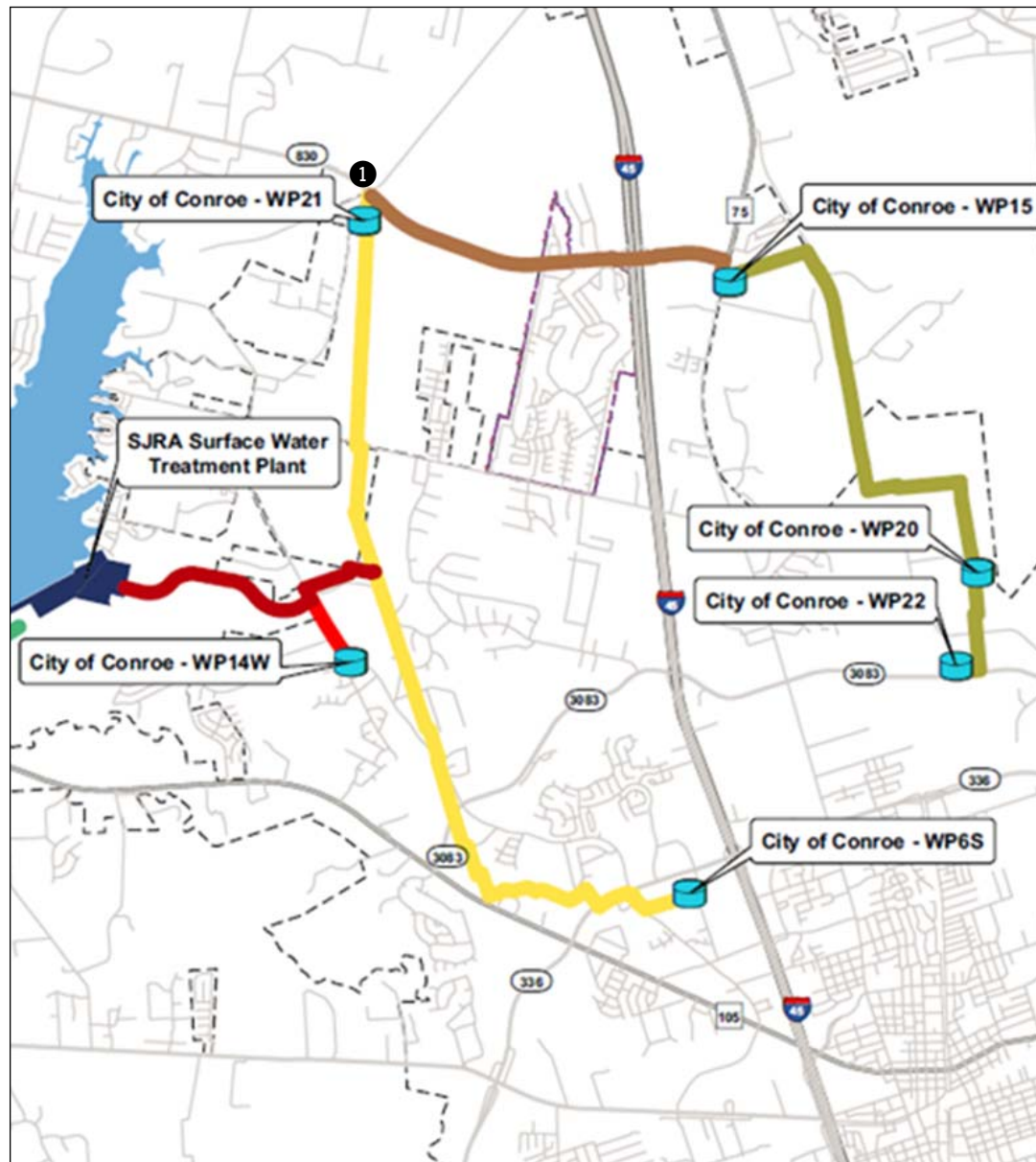


## EXHIBIT 9 (con't) SWF Construction Photos



① Access Road—Temporary bypass roadway installation

## EXHIBIT 10 Surface Water Standpipe Construction Photos





## EXHIBIT 10 (con't) Surface Water Standpipe Construction Photos



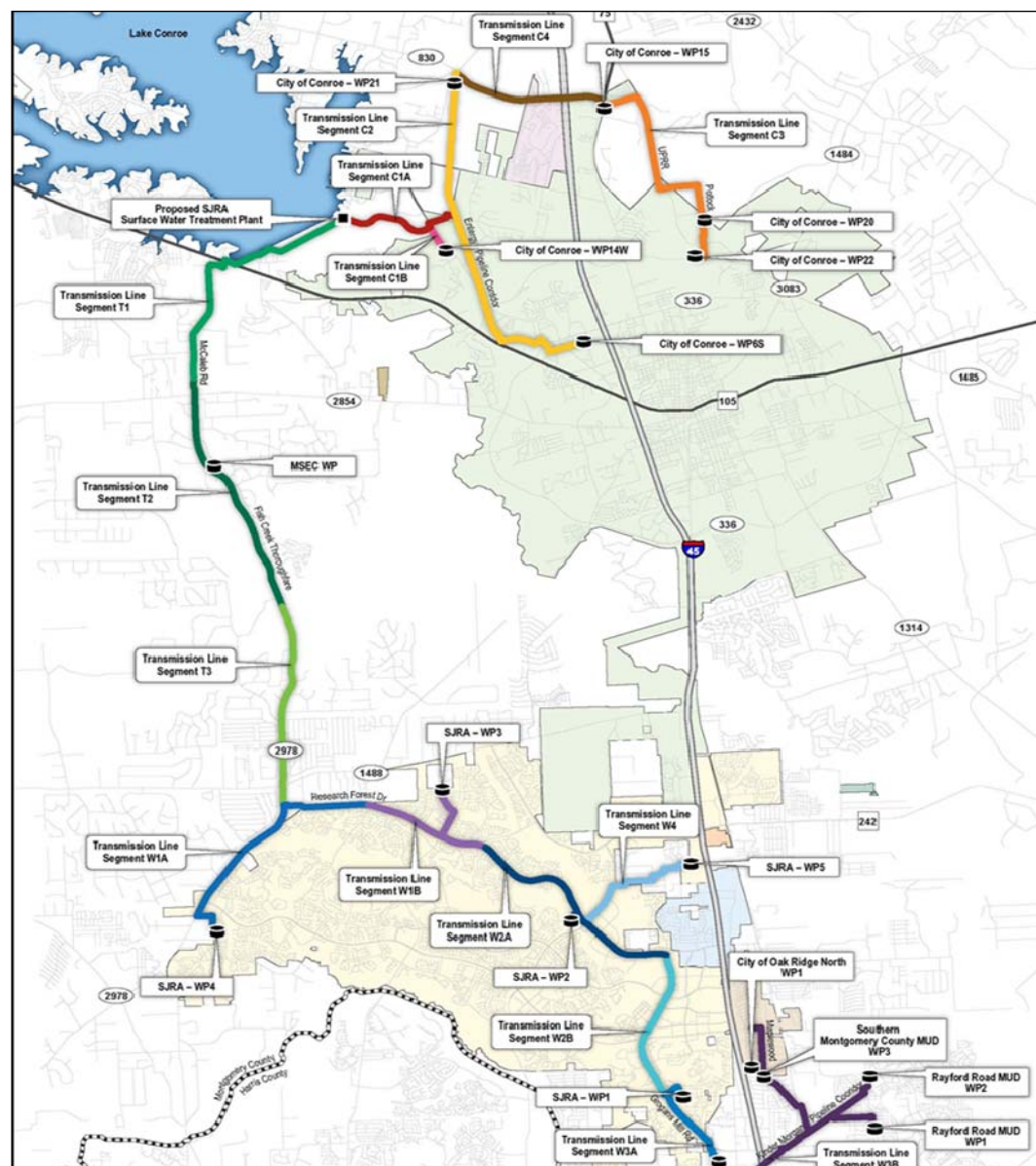
❶ *Asphalt placement at the Standpipe*



## **Supervisory Control and Data Acquisition (SCADA) System Photos**



## EXHIBIT 11 (con't) Supervisory Control and Data Acquisition (SCADA) Photos



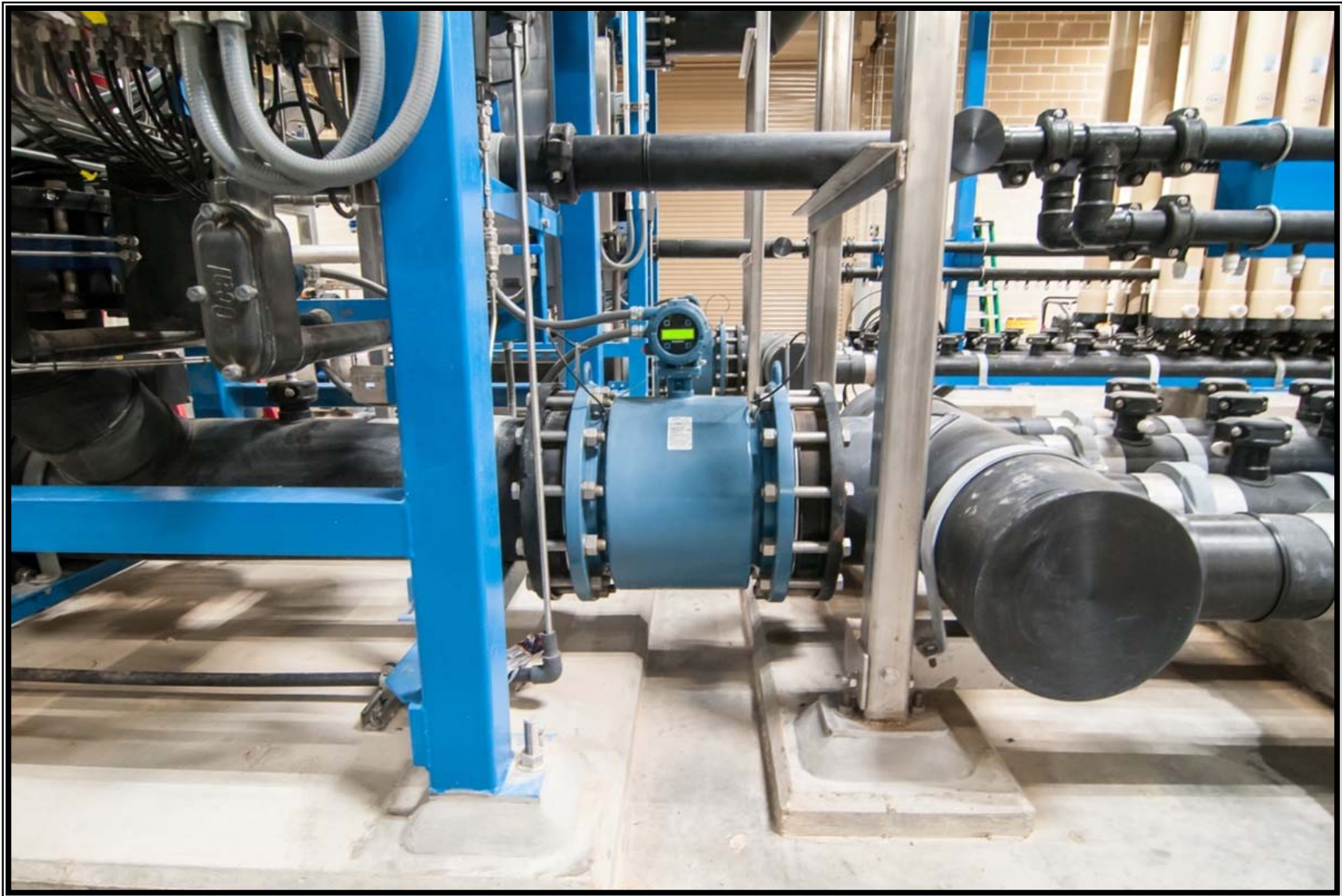
## EXHIBIT 11 (con't) Supervisory Control and Data Acquisition (SCADA) Photos



*Flow meters ranging from 54-inches to 3/8-inch*



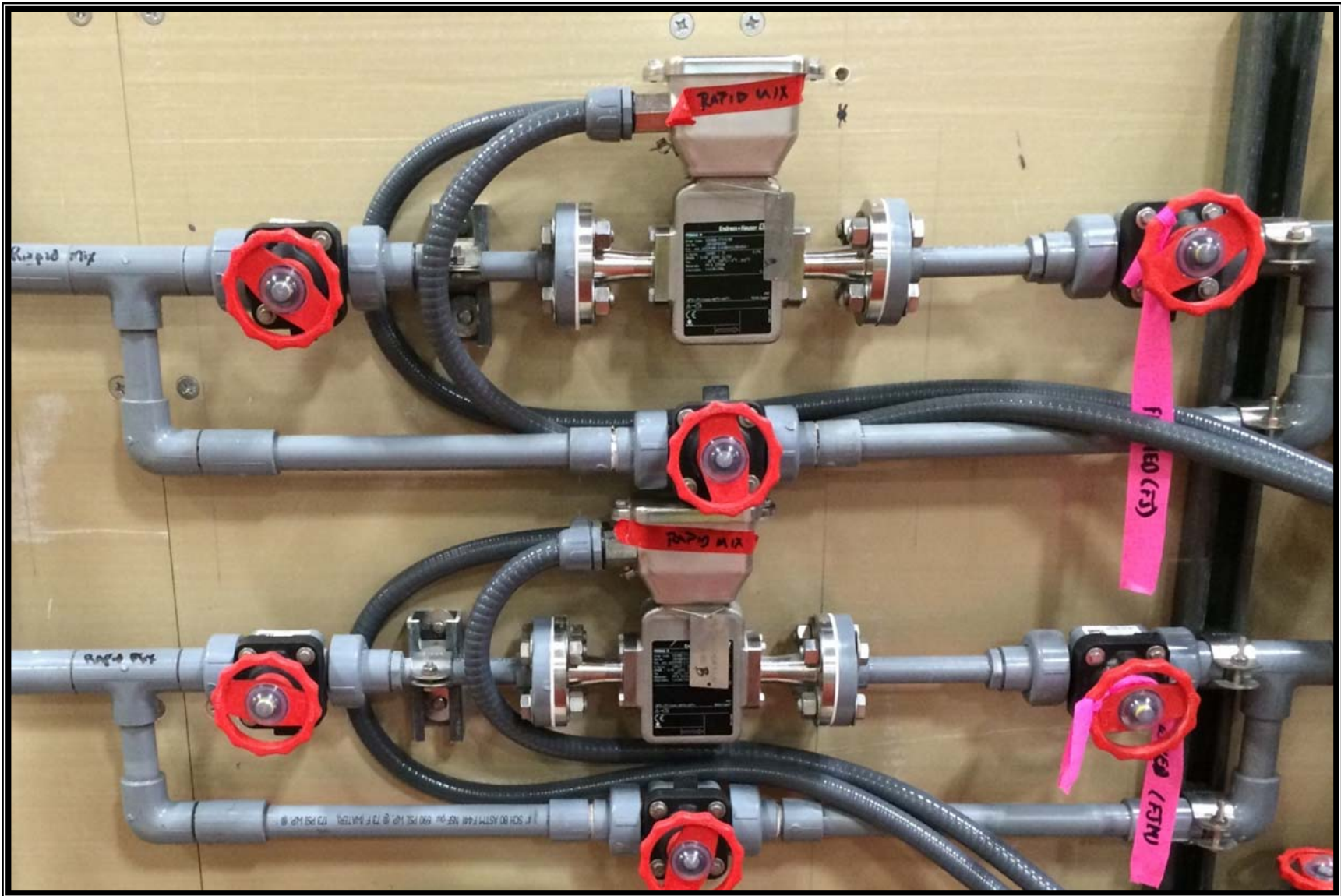
## EXHIBIT 11 (con't) Supervisory Control and Data Acquisition (SCADA) Photos



*Flow meters on the membrane system*

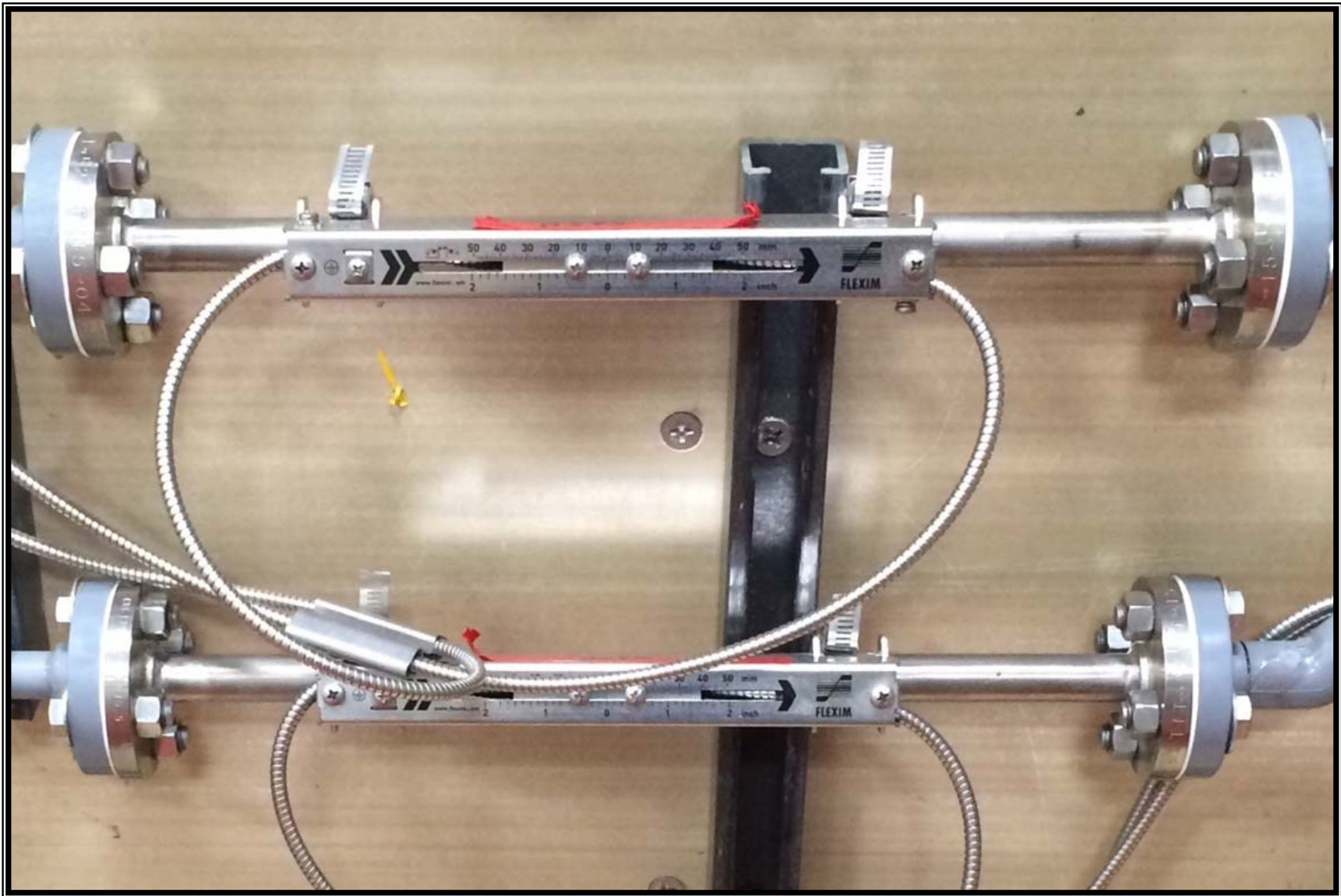


## EXHIBIT 11 (con't) Supervisory Control and Data Acquisition (SCADA) Photos



*Flow meters for the chemical supply system*

## EXHIBIT 11 (con't) Supervisory Control and Data Acquisition (SCADA) Photos



*Flow meters for measuring low flow systems*



## EXHIBIT 11 (con't) Supervisory Control and Data Acquisition (SCADA) Photos



*Pressure gauges and transmitters*

## EXHIBIT 11 (con't) Supervisory Control and Data Acquisition (SCADA) Photos



*Level transmitters (lake and chemical tank)*



## EXHIBIT 11 (con't) Supervisory Control and Data Acquisition (SCADA) Photos



*Surface Water Treatment Facility chlorine analyzers*

## EXHIBIT 11 (con't) Supervisory Control and Data Acquisition (SCADA) Photos



*Water Receiving Facility chlorine analyzer*

## EXHIBIT 11 (con't) Supervisory Control and Data Acquisition (SCADA) Photos



*Granular Activated Carbon (GAC) control valves, flow meter, turbidimeter, and UV254 analyzer*



## EXHIBIT 11 (con't) Supervisory Control and Data Acquisition (SCADA) Photos



*Membrane rack with valves, flow meter, and particle counter*



## EXHIBIT 11 (con't) Supervisory Control and Data Acquisition (SCADA) Photos



*Vibration monitoring*

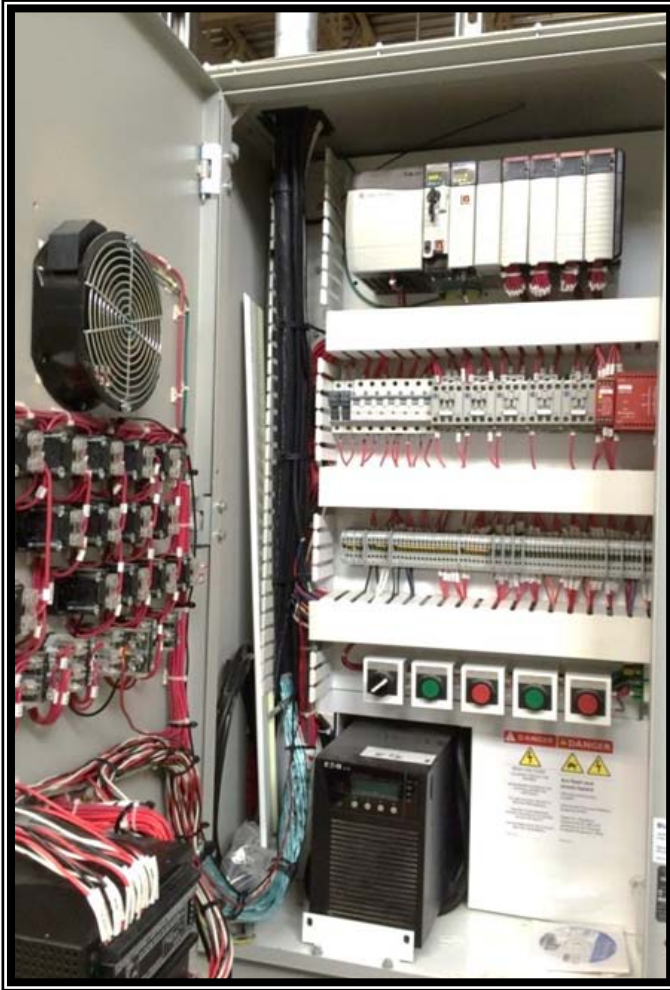
## EXHIBIT 11 (con't) Supervisory Control and Data Acquisition (SCADA) Photos



*Programmable Logic Controller (PLC) Panel—Programmed by SJRA staff*



## EXHIBIT 11 (con't) Supervisory Control and Data Acquisition (SCADA) Photos



*Programmable Logic Controller (PLC) panels—Programmed by vendor*

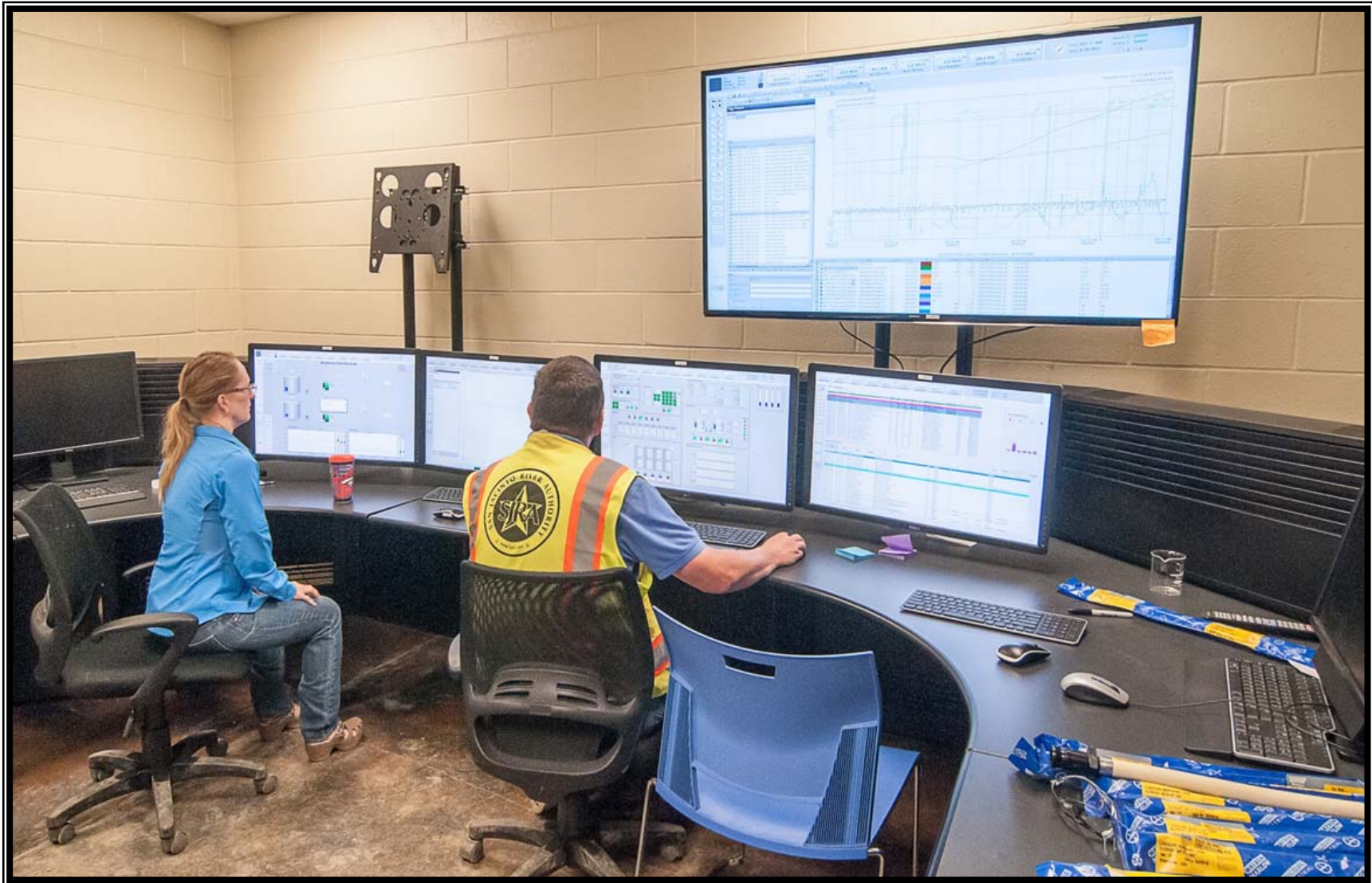


## EXHIBIT 11 (con't) Supervisory Control and Data Acquisition (SCADA) Photos



*Server racks—Operations and Membrane Buildings*

## EXHIBIT 11 (con't) Supervisory Control and Data Acquisition (SCADA) Photos



*Membrane Building Control Room*



## EXHIBIT 11 (con't) Supervisory Control and Data Acquisition (SCADA) Photos



*Operations Building Control Room*



## EXHIBIT 11 (con't) Supervisory Control and Data Acquisition (SCADA) Photos



*The end result!*

## Facility Improvements by GRP Participants Photos





## EXHIBIT 12 (con't) Facility Improvements by GRP Participants Photos



*New pump building and generator at the City of Conroe's Water Plant No. 6*



## 7.0 GRP PROGRAM EXTENSIONS

### 7.1 ENGINEERING

Design efforts are underway for the GRP Program Extension projects. Below is a summary of the extension projects through the month of July.

**Transmission Segment W3C**—Segment W3C includes approximately 6,900 linear feet of 12-inch pipe to be constructed east of and connecting to Segment W3B along the Kinder Morgan (Tennessee Gas) pipeline corridor east of I-45, to northward along Aldine Westfield Road to the Montgomery County MUD 99 Water Plant No. 1. The 90% design drawings and specifications have been reviewed. The 100% design drawing and specifications are currently in process.

**MUD 99 Receiving Facilities**—The 100% design drawings and specifications were initiated in December and are currently in process. At this time, these documents are planned to be combined with the Segment W3C transmission contract documents for a single contract.

