

### **INTEGRATED PIPELINE PROJECT** MONTHLY EXECUTIVE SUMMARY

June 2018



**IPL PROGRAM MANAGEMENT** 

Tarrant Regional Water District 804 East Northside Drive Fort Worth, TX 76102 817.720.4469 p 817.720.4397 f iplproject.com @IPL\_Project WATER UTILITIES (DWU) have partnered to finance, plan, design, construct and operate the Integrated Pipeline (IPL) Project. The IPL Project is an integrated water delivery transmission system connecting Lake Palestine to Lake Benbrook with connections to Cedar Creek and Richland-Chambers Reservoirs integrating TRWD's existing pipelines and creating flexibility in delivery as well as quick response to fluctuating customer water demands. The IPL Project consists of 150 miles of pipeline, three new lake pump stations, and three new booster pump stations delivering a required capacity of 350 million gallons per day (MGD) of raw water to

TARRANT REGIONAL WATER DISTRICT (TRWD) and the CITY OF DALLAS

North Central Texas. TRWD and DWU currently serve over 4.1 million residents and the IPL will allow these agencies to continue supporting regional community and economic growth.

## **PROGRAM SUPPORT SERVICES**

as of 06.30.18

CONTRACT DESIGN AND CONSTRUCTION	DESCRIPTION	BUDGET	CONTRACTS ISSUED	TOTAL INVOICED
PROGRAM WIDE PROFESSIONAL SERVIO	CES	\$133,062,000	\$93,595,112	\$84,833,689
Program Management	Overall program management services for implementation of the IPL Project. (Extension of TRWD staff)	\$45,000,000	\$35,124,711	\$35,124,711
Conceptual Design / Environmental / Permitting	Operations plan & Prepare 404 permit application, Envision Application Completion	\$13,551,000	\$13,472,389	\$13,248,699
Value Engineering	Expert review of design	\$640,000	\$472,248	\$472,248
Surveying and Mapping	Control, property survey, legal descriptions, and Provide SUE Level A Survey, GIS	\$14,600,000	\$16,483,710	\$10,543,172
Geotechnical	Initial Characterization of entire IPL Project	\$12,037,000	\$12,336,425	\$12,191,092
Corrosion Engineering Services	Engineering Corrosion Control	\$3,891,000	\$5,326,362	\$4,226,490
Land, Easement Acquisition, & Support	Right of Entry and Land Acquisition Support Services	\$33,993,000	\$3,464,526	\$3,424,068
Studies		\$3,500,000	\$3,883,743	\$3,587,584
SCADA System	Engineering of SCADA system	\$640,000	\$1,508,213	\$547,016
, Microwave System	Engineering of Communications System	\$5,210,000	\$1,522,785	\$1,468,609
DESIGN		\$152,837,000	\$133,181,683	\$118,819,429
Completed		\$101,901,000	\$97,470,103	\$96,423,157
Active		\$24,158,000	\$35,173,164	\$22,396,272
CH2M Hill	Project Operational Information and Operations Manual		\$6,308,293	\$3,197,039
CH2M Hill	Final Conformance of Design of JCC1	\$728,000	\$2,861,718	\$2,362,955
MWH	Final Conformance of Design of Section 9/10/11	\$506,000	\$812,562	\$535,921
	Final Design of Section 12/13/14 - 28.1 miles of 84 - inch			
Black & Veatch	and 108 - inch pipeline	\$11,292,000	\$9,712,410	\$9,700,648
Parsons	Final Conformance of Design of Sections 17/18/Tunnel	\$832,000	\$579,379	\$681,545
Brown & Gay	Final Design of Section 19-1	\$5,770,000	\$7,003,722	\$1,905,316
HDR	Final Design of Section 19-2	\$5,030,000	\$6,989,876	\$3,170,308
Burns & McDonnell Trans. Mgmt.	Development of Transportation Management Plan		\$905,203	\$842,540
Remaining		\$26,778,000	\$538,417	
CONSTRUCTION ADMINISTRATION		\$48,877,000	\$18,550,960	\$12,302,019
CONSTRUCTION / OWNER FURNISHED E	QUIPMENT	\$1,729,540,000	\$636,813,699	\$558,873,058
Completed		\$26,677,000	\$20,634,788	\$20,418,083
Active		\$811,918,000	\$616,178,911	\$538,454,975
Pipeline Section 15-1		\$115,112,000	\$93,687,256	\$93,687,256
Garney Construction	Construction of Section 15-1	\$115,112,000	\$93,687,256	\$93,687,256
JB3		\$83,013,000	\$75,455,547	\$65,053,072
MWH Constructors	Construction of JB3 Pump Station	\$51,473,000	\$57,714,394	\$51,142,843
Oncor Electric	Installation of JB3 Substation Transmission Lines	\$1,066,000	\$957,119	\$923,119
Isolux Corsan	Construction of JB3 Substation	\$7,400,000	\$4,864,888	\$4,864,888
R E Monks	Construction of JB3R Restoration	\$0	\$633,263	\$633,263
Pentair Flow Technologies	Construction of JB3 Pumps, Motors, Drives	\$23,074,000	\$11,285,883	\$7,488,959
Pipeline Section 12/13/MBR/JB4 Bypass		\$167,992,000	\$154,274,263	\$151,802,938
Thalle Midlothian	Construction of Sections 12/13/MBR/JB4 Bypass	\$146,310,000	\$143,534,470	\$141,629,055
BAR Constructors	Construction of Richland-Chambers/Cedar Creek Interconnection Facility	\$21,682,000	\$10,615,564	\$10,049,653
Hilco Electric	Relocation of Electrical Service Lines		\$0	\$0
Hilco Electric	MBR Radio Tower Power		\$33,312	\$33,312
Oncor Electric	Provide Power to IPL 2X12		\$90,918	\$90,918

### CONTRACT DESIGN AND DESCRIPTION CONSTRUCTION BAR Constructors Construction of Section 15-2 Garney Construction Construction of Section 14 Captioned Crossing Inspection Section Construction of Section 17 Tunnel Thalle Midlothian Construction of Sections 17/18/JB2 Byp **BAR Constructors** Construction of JCC1 Intake Construction of JCC1 Pumps, Motors, E Lambda Construction High Voltage Construction of JCC1 HV Transmission Construction of Section 10/11 Construction of KBR S1X10 HV Transm **BAR Constructors** Construction of KBR S1X10 **Garney Construction** Valve Package 1 - Section 15-1 Butterfly Valve Package 2 - Section 15-1 Intercon Valves Valve Package 3 - JB3, Section 15-2, MB **Blackhall Engineering** Valves Valve Package 4 - Section 12 RC/CC Interc Bypass, MBR Yard Butterfly Valves Valve Package 5 - JB3 Butterfly Valves Valve Package 6 - Section 12 RC/CC Inte Multi-Orifice Valves Valve Package 8 - Section 10 & 11 Bypa Valves Blackhall Engineering Valve Package 11 - JCC1 Gate Valve CONSTRUCTION MANAGEMENT CONSTRUCTION MATERIALS TESTING

Magellan

IPL Partners

Ebara

Oncor Electric

IPL Partners

**Oncor Electric** 

**Rodney Hunt** 

**Crispin Valves** 

**Crispin Valves** 

**Ross Valves** 

**Crispin Valves** 

Remaining

ROCIP LAND COST

MISCELLANEOUS GRAND TOTAL

**REMAINING BOND FUNDS** 

PROGRAM LEVEL CONTINGENCY

## **PROGRAM SUPPORT SERVICES**

as of 06.30.18

	BUDGET	CONTRACTS ISSUED	TOTAL INVOICED
	\$97,217,000	\$50,743,593	\$50,743,593
	\$97,217,000	\$50,743,593	\$50,743,593
	\$107,113,000	\$48,462,225	\$46,647,091
	\$107,113,000	\$48,412,225	\$46,597,091
n 14	\$0	\$50,000	\$50,000
	\$109,944,000	\$78,734,525	\$54,693,610
	\$12,252,000	\$33,087,198	\$20,142,779
pass	\$97,692,000	\$45,647,327	\$34,550,831
	\$42,682,000	\$43,394,113	\$17,826,914
	\$21,564,000	\$19,942,714	\$14,966,526
Drives	\$17,775,000	\$12,694,890	\$603,745
		\$5,485,575	\$2,256,644
Lines	\$3,343,000	\$5,270,933	\$0
	\$73,679,000	\$57,121,096	\$46,141,655
	\$72,362,000	\$43,416,722	\$39,801,041
nission Lines		\$17,452	\$17,452
	\$1,317,000	\$13,686,921	\$6,323,162
	\$15,166,000	\$14,306,294	\$11,858,846
ly Valves	\$518,000	\$0	\$0
nnection Facility	\$474,000	\$733,206	\$733,206
BR Yard Gate	\$5,500,000	\$6,278,388	\$6,107,838
connection, JB4	\$3,999,000	\$2,269,140	\$1,970,902
	\$1,249,000	\$1,249,222	\$1,039,098
terconnection	\$715,000	\$526,340	\$352,005
ass Butterfly	\$1,391,000	\$1,461,040	\$699,518
	\$1,320,000	\$1,788,958	\$956,280
	\$890,945,000		
	\$65,170,000	\$64,762,055	\$36,034,294
	\$15,777,000	\$30,765,854	\$17,077,720
	\$17,665,000	\$33,996,201	\$18,956,573
	\$31,728,000		
	\$17,296,000	\$12,013,590	\$7,346,408
	\$203,000	\$225,133	\$225,132
	\$7,791,000	\$11,788,457	\$7,121,276
	\$9,302,000		
	\$2,575,000	\$23,351,087	\$19,502,477
	\$107,384,000	\$65,584,895	\$65,584,895
	\$83,178,000		
	\$2,000,000	\$5,241,268	\$5,241,268
	\$2,341,919,000	\$1,053,094,349	\$908,537,536
			\$341,462,464

## ACCOMPLISHMENTS

#### through 07.31.18

#### JB3RR (Pump Suction Reservoir Grading and Grassing Project)

• Grass coverage to be inspected again in August to determine contract completion.

#### PL12, 13, MBR (Pipeline Sections 12 and 13 combined with the Midlothian Balancing Reservoir)

- Project is Substantially Complete
- Commissioned the 108" Gate Valves and completing electrical and control wiring in Control Building.

JB3 (250mgd Pump Station expandable to 350mgd)

- Continue uncoupled testing of pumps.
- Painting spray water pipe system.
- Installing acoustic wall panels.
- Passed hydrostatic pressure test for YP4/5/6.
- Placed gate valve vault deck.
- Installing of butterfly valve actuators.
- · Continued installing yard sump pump station and valve vault mechanical.
- Installed mechanical piping and instruments in Water Quality Analysis Station #3.
- Continued pulling power and signal cables to Water Quality Stations.
- Completed installation of power to radio tower.
- Continued installation of perimeter fence and continued general site grading.

#### PL15-2 (Pipeline Section15-2 that feeds the JB3 Reservoir)

• Final Completion and Contract Closeout was approved in July.

#### S2X12 (Interconnection Facility of IPL Phase 1 to existing Cedar Creek and Richland Chambers Pipelines)

• Final Completion and Contract Closeout was approved in July.

#### PL14 (Pipeline Section 14 that delivers water from JB3 Pump Station to MBR

- Certificate of Substantial Completion and Reduction of Retainage was approved in July.
- Completing final deficiency list work.

#### **PL17TUN** (Trinity River Tunnel on Pipeline Section 17)

• IPL Partners is scheduled to resume tunnel construction in September.

#### JCC1IN (Intake Structure and Wet Well for JCC1 Pump Station at Cedar Creek)

- Completed placing all wingwalls for Package 1.
- Completed placing bulkhead gate and blank screen panel guides in preparation for secondary pours.
- Continued dredging operations for the main channel in the lake.

- Bulkhead gate manufacturer visited site to perform functional testing.

#### JCC1HV (High Voltage Substation for the JCC1 Pump Station at Cedar Creek)

- Installing ductbank, light poles, wire, switches and other appurtenances.
- Continue installing aluminum buss.
- Received and installed gas and vacuum circuit breakers.

#### JCC1 (Cedar Creek Lake Pump Station)

• Contract was awarded to BAR Constructors at July Board meeting.

#### PL10, 11 (Pipeline Sections 10 and 11 from the JB4 Pump Station to the KBR Pressure Reduction Facility)

- Excavating and grading for the Parcel 125 driveways
- Installing cable mats, anode beds and permanent driveways.
- Began filling pipeline for hydrostatic testing.

#### PL17-18 (Pipeline Sections 17 and 18 from east end of PL15-1 to JCC1 Pump Station)

- Installed 6,400' of 108" pipe.
- Completed anodes and cathodic protection in Henderson County.
- Hauling spoils off ROW and replacing topsoil at ROW in Navarro County.

#### KBRPRS / S1X10 (Pressure Reduction Station at Kennedale Balancing Reservoir connecting Pipeline Section 10)

- Installing ductbank from the S1X10 to the Communication Building inside the KBR.
- Installing building structural steel.

#### **OFE03** (Owner-Furnished 108" Gate Valves)

- Commissioned two 108" Gate Valves at MBR.
- Factory Acceptance Test of Gate Valve 5 passed.

OFE07 (Owner-Furnished pumps, motors and variable frequency drives for JB3)

• Pentair and Siemens Field Service Technicians on site for uncoupled motor testing.

#### OFE08 (Owner-Furnished 66", 84" and 108" Butterfly Valves) • Factory Acceptance Test for S1X10 108" BFV passed.

#### **OFE09** (Owner Furnished pumps, motors and variable frequency drives for JCC1)

• OPT reps were in Viet Nam for additional factory witness testing of pump can and pump bowl castings and coatings.

#### OFE11 (Owner-Furnished 108" Gate Valve)

• No additional testing in July.



JCC1IN Aerial Photo of High Voltage Substation

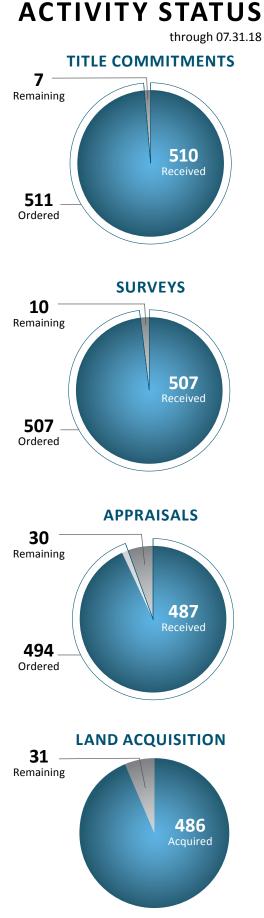


OFE08 Factory Witness Testing of 108-inch BFV

## **PROJECT SCHEDULE**

PROJECT COMPONENTS		20	16			20	)17			20	018 2019			20		2020			
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
SECTIONS 12, 13, MBR CONSTRUCTION																			
JB3 CONSTRUCTION																			
SECTION 14 CONSTRUCTION																			
SECTION 17 TUNNEL CONSTRUCTION																			1
JCC1 PUMP STATION INTAKE WET WELL CONSTRUCTION																			
SECTION 10, 11 CONSTRUCTION																			
SECTION 17, 18 CONSTRUCTION																			
KBRPRS/S1X10 (PRESSURE REDUCTION STA.) CONSTRUCTION																			
JCC1 HIGH VOLTAGE SUBSTATION CONSTRUCTION																			
JCC1 CONSTRUCTION																			1

- - Continued backfilling structure and wingwalls with Class 5 material
  - Received all remaining bulkhead gates, blank screen panels and lifting devices.



Total Parent Parcels: 517

Q4

# M/WBE PARTICIPATION as of 06.30.18

CONTRACT DESIGN	M/WBE & HUB SUB-	CONTRACT COMMITM	INT	M/WBE   H INVOICED 1		TOTAL PROJ COMPLETED DATE	
AND CONSTRUCTION	CONTRACTORS	\$	%	\$	% (PER COMMITMENT)	\$	%
PROGRAM WIDE PROFESSIONAL	SERVICES	\$21,848,474	23%	\$19,979,712	91%	\$84,833,689	91%
Program Management		\$6,636,687	19%	\$6,636,687	100%	\$35,124,711	100%
Conceptual Design / Environmenta	I / Permitting	\$2,700,278	20%	\$2,827,564	105%	\$13,248,699	98%
Value Engineering		\$23,178	5%	\$23,178	100%	\$472,248	100%
Surveying and Mapping		\$5,609,772	34%	\$3,831,616	68%	\$10,543,172	64%
Geotechnical		\$3,638,078	29%	\$3,545,033	97%	\$12,191,092	99%
Corrosion Engineering Services		\$1,053,764	20%	\$761,434	72%	\$4,226,490	79%
Land, Easement Acquisition, & Supp	port	\$1,294,837	37%	\$1,829,624	141%	\$3,424,068	99%
Studies		\$41,717	1%	\$41,717	100%	\$3,587,584	92%
SCADA System		\$384,444	25%	\$33,205	9%	\$547,016	36%
Microwave System		\$465,719	31%	\$449,653	97%	\$1,468,609	96%
DESIGN		\$34,772,306	26%	\$31,805,170	91%	\$118,819,429	89%
Completed		\$26,558,396	27%	\$26,350,053	99%	\$96,423,157	99%
Active		\$8,213,910	23%	\$5,455,117	66%	\$22,396,272	64%
CH2M Hill (Ops Manual)	NDM	\$1,034,447	16%	\$528,073	51%	\$3,197,039	51%
CH2M Hill (JCC1)	JQ, Gupta, APM, HVJ, XENCO	\$721,484	25%	\$862,007	119%	\$2,362,955	839
MWH	Garzabury, Kevin Sloan	\$226,705	28%	\$136,372	60%	\$535,921	66%
Black & Veatch	BDS, CAS, JQ, TME	\$2,425,530	25%	\$2,583,711	107%	\$9,700,648	100%
Parsons	Criado, EPB, HVJ	\$144,845	25%	\$112,357	78%	\$681,545	1189
Brown & Gay	AZB, TME, Lamb-Star, NDM	\$1,750,930	25%	\$477,623	27%	\$1,905,316	27%
HDR	AZB, Daltech, Word Wizards, Gupta	\$1,747,469	25%	\$639,501	37%	\$3,170,308	45%
Burns & McDonnell Trans.							
Mgmt.	Lamb-Star Engineering	\$162,500	18%	\$115,472	71%	\$842,540	93%
Remaining		\$0	0%	\$0	0	\$0	0%
CONSTRUCTION ADMINISTRATIO		\$4,533,900	24%	\$2,721,605	60%	\$12,302,019	66%
CONSTRUCTION / OWNER FURNIS	SHED EQUIPMENT	\$83,090,353	13%	\$99,847,703	120%	\$558,873,058	88%
Completed		\$4,252,128	22%	\$4,091,050	96%	\$20,418,083	99%
Active		\$78,838,225	23%	\$95,756,653	121%	\$538,454,975	87%
Pipeline Section 15-1		\$9,317,301	29%	\$6,649,736	71%	\$93,687,256	100%
Garney Construction	Danridge, SYB, Ricochet, Glenko, Carrasco, Cowboy, Gorrondona, Custom Fence, LKT, Astro Johnny, Pam, Father & Son, Bowden's Erosion	\$9,317,301	29%	\$6,649,736	71%	\$93,687,256	100%
JB3		\$15,193,738	26%	\$11,539,199	76%	\$65,053,072	86%
MWH Constructors	Statewide, Cowboy, TX Enviro, Champion, Ram Tool, Rent-a-Fence, Soto Steel, A-Star, Ike, Greystone, LKT, Accurate, Green Scaping	\$13,743,818	27%	\$10,089,278	73%	\$51,142,843	89%
Oncor Electric		\$1,449,920	3%	\$1,449,920	100%	\$4,864,888	89
Isolux Corsan	Dyna Grid	\$0	0%	\$0	0%	\$923,119	96%
RE Monks		\$0	0%	\$0	0%	\$633,263	13%
Pentair Flow Technologies		\$0	0%	\$0	0%	\$7,488,959	66%
Pipeline Section 12/13/MBR/JB4 By	pass	\$22,096,983	24%	\$22,137,658	100%	\$151,802,938	98%
Thalle Midlothian	LKT, Statewide, Granados, Desert Steel, ETTL, Glenko, A.N.A., Edwards, Buzz, Bradley- Douglas, Pinnacle	\$21,248,870	27%	\$16,445,013	77%	\$141,629,055	99%
BAR Constructors	Fraire's, DFW Aggregates, Ricochet, MMG, LKT, Brock, Garland Heating & Air, Texas Metal, Buzz, Rangel	\$848,113	8%	\$5,692,644	671%	\$10,049,653	95%

CONTRACT DESIGN	M/WBE & HUB SUB-	CONTRACT COMMITM	ENT	M/WBE   H INVOICED 1		TOTAL PROJ COMPLETER DATE	
AND CONSTRUCTION	CONTRACTORS	ACTORS \$ %		\$	% (PER COMMITMENT)	\$	%
Hilco Electric		\$0	0%	\$0	0%	\$0	0%
Hilco Electric		\$0	0%	\$0	0%	\$33,312	100%
Oncor Electric		\$0	0%	\$0	0%	\$90,918	100%
Pipeline Section 15-2		\$3,947,329	16%	\$20.981.334	532%	\$50,743,593	100%
BAR Constructors	Ricochet, Fraire's, DFW Aggregates, Brock, Tidy Toilets, KDAT, Juan Cantu, Buyer's, RAM, Rangel, LKT, Greenscaping, Environmental Safety	\$3,947,329	16%	\$20,981,334	532%	\$50,743,593	100%
Pipeline Section 14		\$6,093,037	22%	\$6,930,294	114%	\$46,647,091	96%
Garney Construction	AEA, Gorrondona, JC Welding, LKT, Statewide, Bowdens	\$6,093,037	28%	\$6,930,294	114%	\$46,597,091	96%
Magellan	Captioned Crossing Inspection Section 14	\$0	0%	\$0	0%	\$50,000	100%
Pipeline Section 17		\$12,041,871	24%	\$3,478,208	29%	\$54,693,610	69%
IPL Partners	LKT, Industry Junction, Eagle Aggregate, Suncoast Res, ATS Drilling, RECS, ANA, Alliance,Ram, JC Welding, Luis Moreno	\$6,642,235	24%	\$1,679,025	25%	\$20,142,779	61%
Thalle Midlothian	Fleet Lube, Rambo Controls, AE Trucking, MKI Construction, Stome Water Management, Industy Junction, Ortega Land Clearing	\$5,399,636	25%	\$1,799,182	33%	\$34,550,831	76%
JCC1		\$3,014,075	11%	\$14,938,115		\$17,826,914	41%
BAR Constructors	Industry Junction, K&A Steel, Ricochet Fuel, Ricochet Fuel, Tidy Toilets, Buzz Custom Fence	\$1,011,840	6%	\$14,050,963	1389%	\$14,966,526	75%
Ebara		\$0	0%	\$0	0%	\$603,745	11%
Lambda Construction	High Voltage	\$2,002,235	37%	\$887,152	44%	\$2,256,644	41%
Oncor Electric		\$0	0%	\$0	0%	\$0	0%
Pipeline Section 10/11		\$7,133,891	20%	\$9,102,110	128%	\$46,141,655	81%
IPL Partners	LKT, Industry Junction, Eagle Aggregate, Suncoast Res, ATS Drilling, RECS, ANA, Alliance,Ram, JC Welding, Luis Moreno	\$5,708,755	24%	\$2,778,948	49%	\$39,801,041	92%
Oncor Electric		\$0	0%	\$0	0%	\$17,452	100%
BAR Constructors	Industry Junction,VSG Trucking, Ricochet, MMG Disposal,Garland HVAC,CMC Rebar, Buzz Custum Fence, K&A Steel, Rangle Land Surveying	\$1,425,136	11%	\$6,323,162	444%	\$6,323,162	46%
Valve Packages		\$0	0%	\$0	0%	\$11,858,846	83%
CONSTRUCTION MANAGEMENT		\$23,237,427	36%	\$14,683,568	63%	\$36,034,294	56%
Completed		\$10,553,046	34%	\$6,297,951	60%	\$17,077,720	
Active		\$12,684,381	37%	\$8,385,618	66%	\$18,956,573	56%
CONSTRUCTION MATERIALS TEST	ING	\$7,226,826	60%	\$3,919,694	54%	\$7,346,408	61%
Completed		\$219,036	97%	\$219,036	100%	\$225,132	100%
Active		\$7,007,790	59%	\$3,700,658	53%	\$7,121,276	60%
ROCIP		\$1,499,307	6%	\$308,121	21%	\$19,770,594	85%
		\$176,208,593	25%	\$173,265,573	98%	\$837,979,490	85%
		\$0	0%	\$61,892	0%	\$65,584,895	281%
MISCELLANEOUS		\$0 \$176 208 502	0% 25%*	\$0	0%	\$5,241,268	8%
GRAND TOTAL		\$176,208,593		\$173,327,465 M/WBE/HUB Invo	98%	\$908,805,653	86%
* Denotes narticination	percentage excluding cost of pip	e and owner		Grand Total Invoic			3,327,465 3,805,653
furnished equipment.	percentage excluding cost of pip			* Exclusions Invoid			5,929,228
jaminea equipment.				MWBE %			27.00%

## M/WBE PARTICIPATION as of 06.30.18

## **PROJECT COMPONENTS**

PIPELINE SEGMENTS	CORE PROJECT	DESCRIPTION
Section 9		KBR Turn-Out Tee to existing Benbrook Connection Pipeline (10.6 mi. 84" dia. Pipe + 5 mi. 120" Tunnel)
Section 10	۵	KBR Turn-Out Tee to KBR (2.4 mi. 84" dia. Pipe)
Section 11	۵	JB4 to KBR Turn-Out Tee (10 mi. 84" dia. Pipe)
Section 12	۵	JB4 to existing CC and RC Pipelines (2.2 mi. 108" dia. Pipe)
Section 13	۵	MBR2 (Midlothian Balancing Reservoir) to JB4 (11 mi. 108" dia. Pipe)
Section 14	۵	JB3 to MBR2 (Midlothian Balancing Reservoir) (14.9 mi. 108" dia. Pipe)
Section 15	۵	JB2 to JB3 (28.5 mi 108" dia. Pipe)
Section 16		JRC1 (Joint Richland Chambers Lake Pump Station) to JB2 (12.3 mi. 96" dia. Pipe)
Section 17	۵	Cedar Creek Connection to JB2 (11.2 mi. 108" dia. Pipe)
Section 18	۵	JCC1 (Joint Cedar Creek Lake Pump Station) to Cedar Creek Connection (0.2 mi. 108" dia. Pipe)
Section 19		LP1 (Lake Palestine Pump Station) to Cedar Creek Connection (42.3 mi. 84" dia. Pipe)

PUMP STATIONS	CORE PROJECT	DESCRIPTION
Palestine Pump Station		150 mgd with new intake
Cedar Creek Pump Station	۵	277 mgd with new intake
Richland Chambers Pump Station		250 mgd Ultimate Design Capacity
Booster Pump Stations		Two @ 347 mgd and one @ 197 mgd (♦ one 347 mgd station - JB3)

SUPPORT FACILITIES	CORE PROJECT	DESCRIPTION
Reservoirs	٠	Three reservoirs (80 $-$ 400 mgd) - two for booster pump stations and one for balancing. Two of the reservoirs are core projects $-$ JB3R and MBR
Deep Tunnels		5 mi of 10' dia. tunnel @ Crowley (included in length of Section 9)
Substations & High Voltage Transmission Lines		Six substations and 4 mi. of high voltage transmission lines ( $\blacklozenge$ two substations)
Microwave Communications and SCADA System	۵	Provides remote operations capability and system monitoring

