

**Alliance Regional Water Authority  
Technical Committee**

**REGULAR MEETING**



**ALLIANCE WATER**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Call-In Number: 1-346-248-7799

Meeting ID: 982 8616 3170

Passcode: 495028

**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

A quorum of Alliance Regional Water Authority's (the Authority's) Technical Committee will hold a meeting by telephonic conference call at 3:00 PM, Wednesday, May 11, 2022. The public may participate in this meeting by calling the following number and code:

**ZOOM MEETING LINK**

Call-In Number: 1-346-248-7799

Meeting ID: 982 8616 3170

Passcode: 495028

Members of the public wishing to make public comment during the meeting must register by emailing [info@alliancewater.org](mailto:info@alliancewater.org) prior to 3:00 p.m. on May 11, 2022. This meeting will be recorded and the audio recording will be available on the Authority's website after the meeting. A copy of the agenda packet will be available on the Authority's website at the time of the meeting. Additional information can be obtained by calling Graham Moore at (512) 294-3214.

A. CALL TO ORDER

B. ROLL CALL

C. PUBLIC COMMENT PERIOD (Note: Each person wishing to speak must submit a completed Public Comment Form to the Executive Director or his/her designee before the public comment period begins.)

D. CONSENT AGENDA

- D.1 Consider approval of minutes of the Regular Technical Committee Meeting held April 13, 2022. ~ *Graham Moore, P.E., Executive Director*

E. PRESENTATIONS TO THE COMMITTEE

- E.1 None.

F. ITEMS FOR COMMITTEE ACTION OR DISCUSSION/DIRECTION

- F.1 Update and possible direction to Staff regarding construction of the Authority's Phase 1B program. ~ *Chris Noe, P.E., Pape-Dawson Engineers*
- F.2 Update, discussion and possible direction to Staff regarding the Authority's Phase 1B program. ~ *Ryan Sowa, P.E., Kimley-Horn & Associates*

**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

- F.3 Discussion and possible recommendation to the Board to approve Supplemental Amendment #1 to Work Order #6 with Pape-Dawson Engineers, Inc. for a Commissioning and Startup Plan and System Test Packages for the Phase 1B Water Treatment Plant and Raw Water Infrastructure Project. ~ *Graham Moore, P.E., Executive Director.*
- F.4 Discussion and possible recommendation to the Board to approve Work Order #4 with HVJ South Central Texas – M&J, , Inc. for material testing on the Segment B Pipeline project. ~ *Graham Moore, P.E., Executive Director.*
- F.5 Discussion of the draft Authority budget for FY 2022-23; and possible direction to staff. ~ *Graham Moore, P.E., Executive Director.*
- F.6 Update and possible direction to Staff regarding the Authority's infrastructure during the February 2022 winter freeze. ~ *Jason Biemer, Director of Operations*
- F.7 Update on status of groundwater management in project target area, and Gonzales County Underground Water Conservation District, Plum Creek Conservation District, Groundwater Management Area 13, Region L Planning Group, Guadalupe-Blanco River Authority, Hays County and CAPCOG activities. ~ *Graham Moore, P.E., Executive Director*
  
- G. EXECUTIVE DIRECTOR REPORT - Update on future meeting dates, locations, consultant invoices paid, approved changed orders, status of Authority procurements, Executive Director activities and other operational activities where no action is required. ~ *Graham Moore, P.E., Executive Director*
  
- H. COMMITTEE MEMBER ITEMS OR FUTURE AGENDA ITEMS – Possible acknowledgement by Committee Members of future area events and/or requests for item(s) to be placed on a future agenda where no action is required.
  
- I. EXECUTIVE SESSION
  - I.1 *Executive Session pursuant to the Government Code, Section 551.071 (Consultation with Attorney) and/or Section 551.072 (Real Property Deliberations) regarding:*

**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

- A. *Water supply partnership options*
- B. *Groundwater leases*
- C. *Acquisition of real property for water supply project purposes*

I.2 Action from Executive Session on the following matters:

- A. *Water supply partnership options*
- B. *Groundwater leases*
- C. *Acquisition of real property for water supply project purposes*

J. ADJOURNMENT

**NOTE:** *The Technical Committee may meet in Executive Session to consider any item listed on this agenda if a matter is raised that is appropriate for Executive Session discussion. An announcement will be made of the basis for the Executive Session discussion. The Technical Committee may also publicly discuss any item listed on the agenda for Executive Session.*

**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

**A. CALL TO ORDER**

---

No Backup Information for this Item.

**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

**B. ROLL CALL**

---

<u>NAME</u>	<u>PRESENT</u>
-------------	----------------

Blake Neffendorf

James Earp

Paul Kite

Humberto Ramos

Tim Samford

Regina Franke

<u>NON-VOTING MEMBERS</u>	<u>PRESENT</u>
---------------------------	----------------

Mayor Lee Urbanovsky

**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

**C. PUBLIC COMMENT PERIOD**

---

Each person wishing to speak must submit a completed Public Comment Form to the Executive Director or his/her designee before the public comment period begins.

Comments are limited to 3-minutes per agenda item and three minutes total for all non-agenda topics. If using a translator, comments are limited to six minutes per agenda item and six minutes total for non-agenda topics.

**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

**D. CONSENT AGENDA**

---

Item D.1 is presented as part of the consent agenda.



**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

**D.1** Consider approval of minutes of the Technical Committee Meeting held April 13, 2022. ~ *Graham Moore, P.E., Executive Director*

---

Attachment(s)

- 2022 04 13 Technical Committee Meeting Minutes

**Technical Committee decision needed:**

- Approval of minutes.



**Alliance Regional Water Authority**

**TECHNICAL COMMITTEE MEETING**

**MINUTES**

**Wednesday, April 13, 2022**

The following represents the actions taken by the Technical Committee of the Alliance Regional Water Authority (Alliance Water) in the order they occurred during the meeting. The Technical Committee convened in a meeting on Wednesday, February 9, 2022 by telephonic conference call in accordance with Governor Abbott's Executive Order, declaration of the COVID-19 public health threat, and action to temporarily suspend certain provisions of the Texas Open Meetings Act.

**A. CALL TO ORDER.**

**The Alliance Water Technical Committee Meeting was called to order at 3:00 p.m. by Mr. Samford.**

**B. ROLL CALL.**

- **Present: Neffendorf, Earp, Kite, Ramos and Samford. Mr. Samford left in Item F.3.**
- **Absent: Franke and Urbanovsky.**

**C. PUBLIC COMMENT PERIOD**

- **None.**

**D. CONSENT AGENDA**

**D.1 Consider approval of minutes of the Regular Technical Committee Meeting held February 9, 2022.**

- **Motion to adopt the minutes as presented was made by Mr. Neffendorf, seconded by Mr. Earp and approved on a 5-0 vote.**

**E. PRESENTATIONS TO THE COMMITTEE**

**E.1 None.**

## F. ITEMS FOR COMMITTEE ACTION OR DISCUSSION/DIRECTION

- F.1 Update and possible direction to Staff regarding construction of the Authority's Phase 1B program.
- **Mr. Noe Pape-Dawson provided an update on the Phase 1B construction.**
  - **Mr. Neffendorf asked how much SUE work has been done in the pipeline areas to investigate existing utilities.**
  - **Mr. Moore responded that every design contract had SUE service to identify utilities and to minimize conflicts that would be found during construction.**
  - **No Action.**
- F.2 Update, discussion and possible direction to Staff regarding the Authority's Phase 1B program.
- **Mr. Sowa provided an update on the Phase 1B program.**
  - **Mr. Ramos asked about the market volatility and cost – should the Authority consider purchasing materials ahead of time. Will the volatility likely require more financing to be necessary?**
  - **Mr. Sowa responded that there are several concerns related to storing pre-purchased materials, warranties, etc.**
  - **Mr. Moore noted that the intent of the slide was to highlight that the Authority continues to hear concerns about these issues and that more information will be brought back in the next meetings. Funding above what has already been identified is not anticipated to be necessary.**
  - **No Action.**
- F.3 Update, discussion and possible direction to Staff regarding the Authority's Water Quality and Corrosion Report.
- **Mr. Vergara with CP&Y made a presentation on the status of the Authority's Corrosion Report and on the necessary coordination with all of the customers.**
  - **Mr. Ramos asked if the coordination will be done at the Program level and if it is required every 5 years.**
  - **Mr. Moore responded that yes the coordination will be at the Program Level, but that we are not anticipating it to be on a 5-year cycle.**
  - **Mr. Samford asked while the Kyle delivery points are shown as future.**
  - **Mr. Moore stated that they are future because the designs are not completed yet – they are pending decisions by the City of Kyle.**

- **Mr. Samford noted that the lead and copper rules are changing in 2025 per TCEQ, will this effort be complete before that?**
  - **Ms. Vergara stated that yes, the goal is to have this coordination completed in 2022.**
  - **Mr. Kite asked if the addition of a new source triggers a new study? For them, does addition of water from the CRWA Hays-Caldwell Water Treatment Plant trigger the need?**
  - **Ms. Vergara responded that yes, the addition of any new source triggers the requirement. Including adding new Carrizo wells through the Alliance Water treatment plant.**
  - **No Action.**
- F.4 Update, discussion and possible direction to Staff regarding timing and financing of project cost increases.
- **Mr. Moore noted that more information will be provided to the Board of Directors on SWIFT funding compared to issuing debt through the open market.**
  - **No Action.**
- F.5 Update and possible direction to Staff regarding the Authority's infrastructure during the February 2022 winter freeze.
- **Mr. Earp moved to reschedule this presentation to the May meeting.**
  - **No Action.**
- F.6 Update on status of groundwater management in project target area, and Gonzales County Underground Water Conservation District, Plum Creek Conservation District, Groundwater Management Area 13, Region L Planning Group, Guadalupe-Blanco River Authority, Hays County and CAPCOG activities.
- **Mr. Moore provided an update.**
  - **No Action.**

#### G. EXECUTIVE DIRECTOR REPORT

- **No Action.**

#### H. COMMITTEE MEMBER ITEMS OR FUTURE AGENDA ITEMS

- **None.**

I. EXECUTIVE SESSION

- I.1 Executive Session on the following matters:
- A. Water supply partnership options
  - B. Groundwater leases
  - C. Acquisition of real property for water supply project purposes
    - **No Executive Session.**

- I.2 Action from Executive Session on the following matters:
- A. Water supply partnership options
  - B. Groundwater leases
  - C. Acquisition of real property for water supply project purposes
    - **No Action.**

J. ADJOURNMENT

- **Meeting was adjourned at 3:59 p.m. by Mr. Earp.**

**APPROVED:** \_\_\_\_\_, 2022

\_\_\_\_\_

**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

- F.1** Update and possible direction to Staff regarding construction of the Authority's Phase 1B program. ~ *Chris Noe, P.E., Pape-Dawson Engineers*
- 

Background/Information

Chris Noe with Pape Dawson will update the Committee on recent construction activities associated with the Phase 1B program.

Attachment(s)

- Phase 1B Construction Update – May 11, 2022

**Technical Committee Decisions Needed:**

- None.



# PHASE 1B CONSTRUCTION UPDATE

## TECHNICAL COMMITTEE MEETING

CMI Progress

May 2022

Water Resources | Transportation | Land Development | Surveying | Environmental



## Water Treatment Plant / Raw Water Infrastructure (Archer Western / Walker Partners)



### Construction Status

- Archer Western removed shoring for the roof deck at the Recycle Pump Station this period.
- Archer Western continued concrete formwork and concrete placement for the Filter Complex piping trenches.
- Archer Western began the installation of WL-B beginning at well #9.
- The Plate Settler Basin inside wall forms were placed, reinforcing steel installed, followed by the outside wall forms, and concrete placement.
- The pump can footings for the six high service pumps were placed, anchored and plumbed.
- DN Tanks completed the casting of all precast panels this period, as well as completed the erection of panels for the Clearwell.
- Wall slots and dome ring concrete placement for the Clearwell began this period.

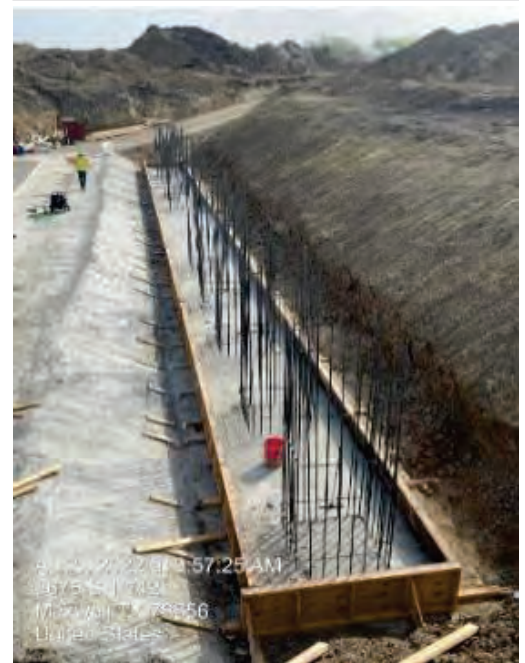


Basin Wall Forms East Side

## Booster Pump Station (MWH / Friese and Nichols)

### Construction Status

- MWH continued with the installation leveling base around the perimeter of the GST for the thickened footing.
- MWH placed the footing for the pump can bases at the pump station.
- MWH placed the pump station wall footing, as well as the first two sections of the pump station walls. The remaining wall section is schedule to be placed next period.



Pump Can Footing

## Segment A (Garney Construction / LAN)

### Construction Status

- Completed installation of access drives.
- Continued installation of LOC/SWPPP fencing.
- Continued clearing of easement.
- Continued conducting MTBA surveys to clear work areas starting on March 15<sup>th</sup>.
- Completed Tunneling at Sandy Fork Creek crossing.
- Began receiving and staging pipe onsite.
- Began tunneling operations to SH-304 crossing.



Seg A – Pipe Delivery



## Segment B (Garney Construction / K Friese)

### Construction Status

- Continued processing Submittals and RFIs
- Continued landowner notifications
- Continued installing construction access entrances and fence gaps
- Continued Survey and Staking of ROW
- Conducted Bird Survey to clear work area for the week(s)
- Continued installation of silt fencing
- Continued Clearing ROW
- Continued Stripping of Topsoil



Seg B – Topsoil Stripping

## OVERSIGHT RECAP

Project	RFIs		Submittals		Test Reports	
	This Period	To Date	This Period	To Date	This Period	To Date
<b>WTP/RWI</b>	3	47	29	177	57	198
<b>BPS</b>	3	20	16	63	20	94
<b>Seg A</b>	3	19	8	26	0	0
<b>Seg B</b>	0	0	9	20	0	0



# PROGRESS PHOTOS



WTP – Placing Clearwell Roof Panels



WTP– HSPS Pump Can Installation



WTP – Raw Water Tank Wall Panel Joint Installation

9

# PROGRESS PHOTOS



BPS – Steel Reinforcement for Pump Station



BPS – Forms for Pump Station



BPS – GST Leveling Base

10

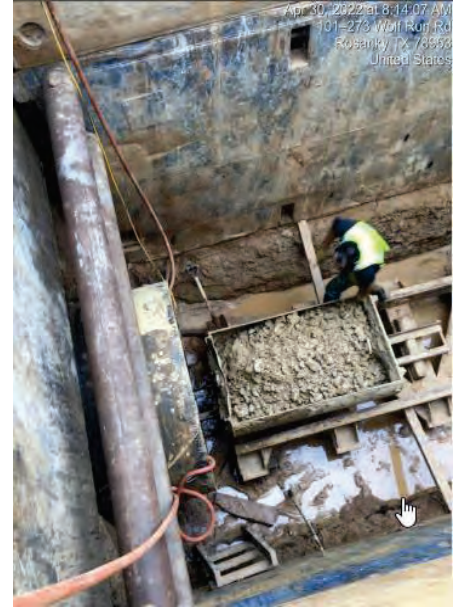
# PROGRESS PHOTOS



Seg A – Pipe Stringing



Seg A – Unloading Pipe



Seg A –Highway 304 Crossing

11

# Progress Photos



Seg B – Fence Gap Installation



Seg B – Construction Entrance Installation



Seg B –Topsoil Removal

12

# QUESTIONS?

**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

- F.2** Update and possible direction to Staff regarding the Authority's Phase 1B program.  
~ *Ryan Sowa, P.E., Kimley-Horn & Associates*
- 

Background/Information

Ryan Sowa with Kimley-Horn will update the Committee on their recent activities associated with the Phase 1B program.

Attachment(s)

- Phase 1B Program Update – May 11, 2022
- Kimley-Horn Monthly Summary of Activities for April 2022

**Technical Committee Decisions Needed:**

- None.



# Phase 1B Program Update

Technical Committee Meeting  
May 11, 2022



**ALLIANCE WATER**

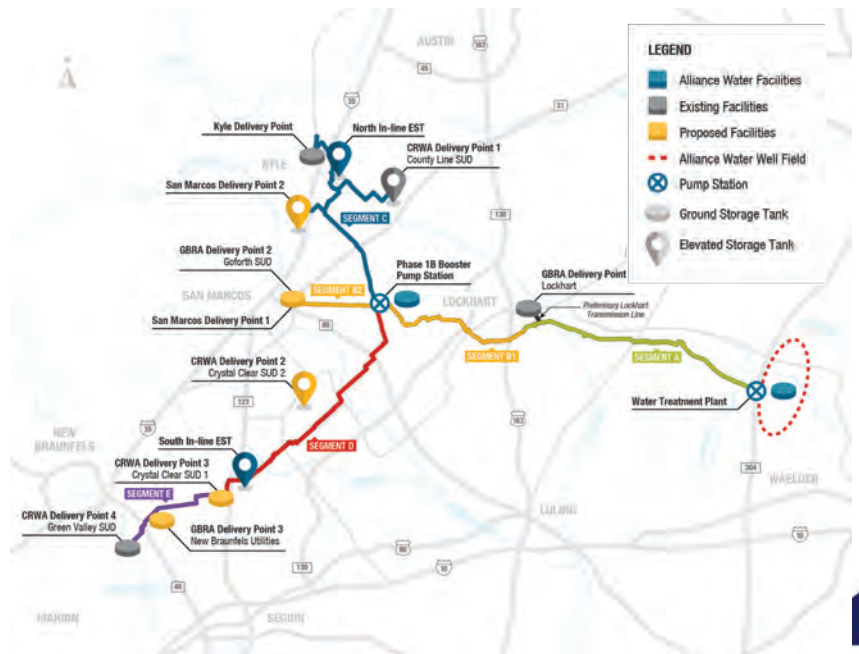
Kimley»Horn  
Expect More. Experience Better.

PRESENTED BY

## Ongoing Progress

### ► Design Milestone Status

- Design Submittals
  - Segment E – 100% submittals anticipated in June
  - Segment C – 100% submittals anticipated in June
- TWDB Reviews
  - Segment B
    - Easement Acquisition Funding Release under Review
  - Segment D
    - Environmental Data Report under Review
    - Engineering Feasibility Report under Review



# Ongoing Progress

## ► Additional Updates

- Segment D & E Environmental Status
- Market Volatility / Supply Chain Concerns



# Pipeline Easement Acquisition Status

Pipeline Segment	Number of Parcels	STATUS						
		(A) Appraisal/Offer in Development	(B) Negotiation (Initial Offer)	(C) Negotiation (Final Offer)	(D) = (A+B+C) Appraisal / Negotiation	(E) Condemnation in Process	(F) = (D+E) Possession Still Needed	(G) Purchase Agreement Signed / Possession Obtained
A	39	0	0	0	0	0	0	39
B	52	0	0	0	0	0	0	52
D	57	0	0	1	1	9	10	47
C	78	6	20	4	30	28	58	20
E	38	2	4	0	6	19	25	13
Well Field	17	0	2	5	7	0	7	10
<b>Total</b>	<b>281</b>						<b>100</b>	<b>181</b>





## COST UPDATES BASED ON APRIL MILESTONE SUBMITTALS/RESULTS

		ORIGINAL (FEB. 2019)	REVISED	
	Construction Package	ARWA Total Projected Cost	ARWA Total Projected Cost	DIFFERENCE
<b>Submittal (%) Combined Program Infrastructure</b>				
Const.	Water Treatment Plant	\$ 25,200,000	\$ 29,500,000	\$ 4,300,000
Const.	Booster Pump Station & GBRA Meter Stations	\$ 12,100,000	\$ 13,700,000	\$ 1,600,000
60	Inline EST (South)	\$ 3,600,000	\$ 4,100,000	\$ 500,000
Const.	Pipeline Segment A	\$ 27,200,000	\$ 28,600,000	\$ 1,400,000
Const.	Pipeline Segment B	\$ 27,100,000	\$ 33,800,000	\$ 6,700,000
100	Pipeline Segment D	\$ 36,300,000	\$ 43,700,000	\$ 7,400,000
90	Pipeline Segment E	\$ 9,500,000	\$ 10,900,000	\$ 1,400,000
	<b>Subtotal</b>	<b>\$141,000,000</b>	<b>\$164,300,000</b>	<b>\$ 23,300,000</b>
<b>ARWA-Only Infrastructure</b>				
Const.	Well Drilling	\$ 3,800,000	\$ 3,300,000	(\$ 500,000)
Const.	Raw Water Infrastructure	\$ 7,000,000	\$ 10,600,000	\$ 3,600,000
Const.	ARWA Booster Pump Station & Delivery Points	\$ 7,700,000	\$ 4,800,000	(\$ 2,900,000)
30	Inline EST (North)	\$ 5,400,000	\$ 6,500,000	\$ 1,100,000
90	Pipeline Segment C	\$ 64,500,000	\$ 68,600,000	\$ 4,100,000
90	Pipeline Segment E (ARWA-Only)	\$ 6,700,000	\$ 12,600,000	\$ 5,900,000
No Design	Administration and Operations Building	\$ 4,300,000	\$ 4,200,000	(\$ 100,000)
	<b>Subtotal</b>	<b>\$ 99,400,000</b>	<b>\$110,600,000</b>	<b>\$ 11,200,000</b>
<b>Total</b>		<b>\$240,400,000</b>	<b>\$274,900,000</b>	<b>\$34,500,000</b>

MAY 2022 UPDATE

**NO CHANGE FROM  
APRIL UPDATE**



# Questions?

May 5, 2022

## **Project Monthly Summary**

April 2022 Tasks Performed:

- Task 2 – Stakeholder Coordination
  - Coordination and/or meetings with entities including: Caldwell County, Guadalupe County, Bluebonnet Electric Coop, TxDOT, TCEQ, and TWDB.
  - Continued weekly task coordination with Alliance Water.
  - Prepared and presented the Technical Committee Meeting Update.
  - Prepared and presented the Board Meeting Update.
  - Prepared and presented the Project Advisory Committee Meeting Update.
  - Prepared for and held Monthly Status Meeting with Alliance Water.
  
- Task 3 – Budgeting
  - Prepared and presented the monthly Budget Update for the Technical Committee and Board meetings.
  - Continued updates to Budget Workbook to include monthly tracking of actual costs for ARWA review.
  
- Task 4 – Schedule
  - Revised Project Deliverable Schedule based on the feedback received from ARWA, Design Consultants, and Construction Management & Inspection team.
  - Integrated each project schedule into overall Program schedule. Developed and distributed the monthly Program schedule summary.
  
- Task 6 – Data Management
  - Continued to coordinate with ARWA and Construction Management & Inspection Team to begin integrating construction data collected on the new GIS WebMap.
  - Ongoing maintenance of Microsoft SharePoint Online program.
  - Continued updating of web-based GIS for easement acquisition process and alignment changes.
  
- Task 7 – Environmental Management
  - Continued coordination with Program Environmental Consultant concerning the comment responses to the USACE.
  - Continued coordination with the Program Environmental Consultant regarding additional hazmat studies for Segments C and E.
  - Performed coordination between Program Environmental Consultant and Land Acquisition Consultant to clarify environmental field work to be done on properties as part of right-of-entry process.

**Alliance Water – Phase 1B Infrastructure – Owner’s Representative**

---

- Monthly progress meeting and ongoing coordination with Program Environmental Consultant.
- Continued coordination between Program Environmental Consultant and Design Engineers.
- Reviewed Program Environmental invoices, schedule, and risk log.
  
- Task 8 – Land Acquisition Management
  - Coordinated the appraisal process for Segments C, E, and W parcels.
  - Coordinated with Program Survey Consultant, Program Environmental Consultant, and Land Acquisition team to address questions that arise as part of the field work coordination process.
  - Performed weekly QC of parcel files in SharePoint, provided comments to Land Acquisition team.
  - Weekly coordination meeting with land agents to discuss status of rights-of-entry and to provide Program clarification on any questions/requests that have come from landowners.
  - Reviewed Program Land Acquisition team, Program Appraiser, and Program Survey invoices.
  - Continued field work coordination to notify landowners of upcoming field work by consultants.
  
- Task 9 – Texas Water Development Board Management
  - Continued coordination with TWDB Staff to track all EFRs, environmental reports, and bid documents currently under review as well as preparation of funding release requests.
  
- Task 10 – Design Standards
  - Updated and released the revised Construction Standards to the Design Consultants given the questions arising from construction activities.
  
- Task 11 – Engineering Design Management
  - Pipelines:
    - Segment A
      - Continue coordination with Design Consultant for construction phase services.
    - Segment B
      - Continued coordination with Design Consultant for procurement phase services.
      - Attended Pre-Construction Meeting with Contractor and Design Consultant.
    - Segment C
      - Continued coordination with Design Consultant for final design.
      - Continued coordination with Design Consultant regarding ongoing field work and pipeline alignment considerations.

**Alliance Water – Phase 1B Infrastructure – Owner’s Representative**

---

- Segment D
      - Continued coordination with Design Consultant for final design and preparation for procurement.
    - Segment E
      - Continued coordination with Design Consultant for final design.
  - Wellfield:
    - Continued coordination with TWDB regarding the close out approval for Wells 6-9.
  - Raw Water Infrastructure:
    - Continued coordination with Design Consultant for construction phase services.
  - Water Treatment Plant:
    - Continued coordination with Design Consultant concerning Hydraulics/Surge development.
    - Continued coordination with Design Consultant for construction phase services.
  - Booster Pump Station:
    - Coordinated with Design Consultant for construction phase services.
  - Inline Elevated Storage Tanks:
    - Continued coordination with Design Consultant for 90% design development.
  - Other:
    - Monthly progress meetings with all Design Consultants (pipelines, water treatment plant, raw water infrastructure, wellfield, booster pump station).
    - Review invoices, schedules, and risk logs for consultants.
- Task 13 – Electrical Power Planning
  - Continued coordination with ARWA and GVEC to develop agreement language for service to the well field.
  - Continued coordination with GVEC regarding electric service to the WTP and wellfield.
- Task 14 – Permit Coordination/Tracking
  - Continued Permit coordination with Pipeline Consultants.
  - Continued coordination with Caldwell, Guadalupe, and Hays County TxDOT offices concerning roadway crossings.
  - Continued coordination with Caldwell, Guadalupe, and Hays Counties regarding on going permit reviews.
  - Continued General Coordination with GVEC, BBEC, and LCRA.
  - On-going Permit Tracking Log Updates.
- Task 15 – Procurement and Construction Phase Services

**Alliance Water – Phase 1B Infrastructure – Owner’s Representative**

---

- On-going coordination with the Construction Management & Inspection team.
- On-going coordination with WTP, RWI, BPS, Segment A, and Segment B Design Consultants during the construction phase.

May 2022 Projection:

- Task 2 – Stakeholder Coordination
  - Coordination and/or meetings with entities including: Caldwell County, Guadalupe County, GVEC, Bluebonnet Electric Coop, TxDOT, TCEQ, and TWDB.
  - Continue weekly task coordination with Alliance Water.
  - Prepare and present Technical Committee Meeting Update.
  - Prepare and present Project Advisory Committee Meeting Update.
  - Prepare and present Board Meeting Update.
  - Prepare for and hold Monthly Status Meeting with Alliance Water.
  
- Task 3 – Budgeting
  - Prepare and present the monthly Budget Update for the Technical Committee and Board meetings.
  - Continue updates to Budget Workbook to include monthly tracking of actual costs for ARWA review.
  
- Task 4 – Schedule
  - Revise the Project Deliverable Schedule based on the feedback received from ARWA, Design Consultants, and Construction Management & Inspection team.
  - Integrate each project schedule into overall Program schedule. Develop and distribute schedule update and memorandum.
  
- Task 6 – Data Management
  - Continued coordination with ARWA and Construction Management & Inspection Team to begin integrating construction data collected on the new GIS WebMap.
  - Ongoing maintenance of Microsoft SharePoint Online program.
  - Continued updating of web-based GIS for easement acquisition process and alignment changes.
  
- Task 7 – Environmental Management
  - Continue coordination with Program Environmental Consultant concerning the comment responses to the United States Army Corps of Engineers.
  - Continued coordination with the Program Environmental Consultant regarding additional studies for Segment C and E.

**Alliance Water – Phase 1B Infrastructure – Owner’s Representative**

---

- Perform coordination between Program Environmental Consultant and Land Acquisition Consultant to clarify environmental field work to be done on properties as part of right-of-entry process.
- Monthly progress meeting and ongoing coordination with Program Environmental Consultant.
- Continue coordination between Program Environmental Consultant and Design Engineers.
- Review Program Environmental invoices, schedule, and risk log.
  
- Task 8 – Land Acquisition Management
  - Coordinate the appraisal process for Segment C, E, and W parcels.
  - Coordinate with Program Survey Consultant, Program Environmental Consultant, and Land Acquisition team to address questions that arise as part of the field work coordination process.
  - Perform weekly QC of parcel files in SharePoint, provide comments to Land Acquisition team.
  - Weekly coordination meeting with land agents to discuss status of rights-of-entry and to provide Program clarification on any questions/requests that have come from landowners.
  - Review Program Land Acquisition team, Program Appraiser, and Program Survey invoices.
  - Continue field work coordination to notify landowners of upcoming field work by consultants.
  
- Task 9 – Texas Water Development Board Management
  - Continue coordination with TWDB Staff to track all EFRs, environmental reports, and bid documents currently under review as well as preparation of funding release requests.
  
- Task 11 – Engineering Design Management
  - Pipelines:
    - Segment A
      - Continue coordination with Design Consultant for construction phase services.
    - Segment B
      - Continue coordination with Design Consultant for construction phase services.
    - Segment C
      - Continue coordination with Design Consultant for final design.
      - Continue coordination with Design Consultant regarding ongoing field work and pipeline alignment considerations.
    - Segment D
      - Continue coordination with Design Consultant for final design and preparation for procurement.

**Alliance Water – Phase 1B Infrastructure – Owner’s Representative**

---

- Segment E
      - Begin review of Segment E 100% Design submittal prepared by the Design Consultant.
      - Continue coordination with Design Consultant for final design.
  - Wellfield:
    - Continue coordination with TWDB regarding the close out approval for Wells 6-9.
  - Raw Water Infrastructure:
    - Continued coordination with Design Consultant for construction phase services.
  - Water Treatment Plant:
    - Continue coordination with Design Consultant concerning Hydraulics/Surge development.
    - Continued coordination with Design Consultant for construction phase services.
  - Booster Pump Station:
    - Coordination with Design Consultant for construction phase services.
  - Inline Elevated Storage Tanks:
    - Coordination with Design Consultant for 90% design development.
  - Other:
    - Monthly progress meetings with all Design Consultants (pipelines, water treatment plant, raw water infrastructure, wellfield).
    - Review invoices, schedules, and risk logs for consultants.
- Task 13 – Electrical Power Planning
  - Continue coordination with ARWA and GVEC to develop agreement language for service to the well field.
  - Continue coordination with GVEC regarding electric service to the WTP and wellfield. Bi-weekly meetings will be occurring moving forward with GVEC.
- Task 14 – Permit Coordination/Tracking
  - Continue Permit coordination with Pipeline consultants
  - Coordinate with Hays County concerning the Site Development Permit.
  - General Coordination with TxDOT.
  - Coordinate with Caldwell, Guadalupe, and Hays County TxDOT offices concerning roadway crossings.
  - Continue General Coordination with GVEC, BBEC, and LCRA.
  - On-going Permit Tracking Log Updates.
- Task 15 – Procurement and Construction Phase Services
  - On-going coordination with the Construction Management & Inspection team.
  - On-going coordination with WTP, RWI, BPS, Segment A, and Segment B Design Consultants during the construction phase.

**Alliance Water – Phase 1B Infrastructure – Owner’s Representative**

---

- Task 16 – Other Services
  - Finalize and submit the City of San Marcos Watershed Protection Plan for the Booster Pump Station Plat.

Scope Elements Added/Removed:  
None at this time.

Outstanding Issues/Concerns:  
None at this time.



**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

- F.3** Discussion and possible recommendation to the Board to approve Supplemental Amendment #1 to Work Order #6 with Pape-Dawson Engineers, Inc. for a Commissioning and Startup Plan and System Test Packages for the Phase 1B Water Treatment Plant and Raw Water Infrastructure Project. ~ *Graham Moore, P.E., Executive Director*
- 

Background/Information

Part of the Water Treatment Plant and Raw Water Infrastructure construction contract with Archer-Western includes a \$500,000 allowance to develop and implement a commissioning and startup plan for the Water Treatment Plant. As the project has progressed Staff feels it would be better if the commissioning plan was developed by the Construction Management and Inspection team and jointly implemented by that team and the contractor. This method will allow the Alliance Water staff and design team to have more direct input into the plan so that we can ensure that it is comprehensive in nature.

The attached proposal from Pape-Dawson is their fee to prepare the Commissioning and Startup Plan. They are proposing to contract with Jeff Haasch with JH Engineering who specializes in developing commissioning plans for treatment plants. The total fee for the effort is \$229,505. It is expected that the Water Treatment Plant contractor, Archer-Western, will still have effort to implement the plan, but the combined cost for both development and implantation is expected to be well below the \$500,000 allowance currently provided for in the construction contract. The development of the plan is anticipated to take 9 months and will include a detailed and prioritized sequencing schedule.

Staff proposes that the effort be added as a Supplemental Amendment to Pape-Dawson's current work order for construction management and inspection services.

Attachment(s)

- Commissioning and Startup Plan and System Test Packages proposal dated April 26, 2022

**Technical Committee Decisions Needed:**

- Recommendation to the Board to approve Supplemental #1 to Work Order #6 with Pape-Dawson, Inc. for development of the Startup and Commissioning Plan for the Water Treatment Plant.

April 26, 2022

Mr. Graham Moore  
Alliance Water  
630 E. Hopkins St.  
San Marcos, TX 78666

Via Email: gmoore@alliancewater.org

Re: ARWA Phase 1B CM&I – Work Order #6  
Commissioning and Startup Plan and System Test Packages  
Job No. 12214-06  
Additional Services Request No. 1

Dear Mr. Moore:

This letter is to request funding for additional services for the above referenced site. Attached is our proposed scope and fee to develop the ARWA Commissioning and Startup Plan and the System Test Packages for the Water Treatment Plant and Raw Water Infrastructure Project. This work will be accomplished by JH Engineering, LLC (JHE) under the supervision of Jeff Haasch, PE, PMP and includes the following:

**WTP/RWI Commissioning and Startup Planning**

<b>I. PROJECT MANAGEMENT (TASK 595)</b>	<b>\$3,975</b>
<ul style="list-style-type: none"><li>• Monthly reporting and project administration.</li></ul>	
<b>II. FACILITY STARTUP AND PERFORMANCE DEMONSTRATION (TASK 595)</b>	<b>\$79,580</b>
<ul style="list-style-type: none"><li>• Establish system and system boundaries.</li><li>• Develop equipment lists for all systems and conduct detailed review of equipment specifications.</li><li>• Develop overall detailed schedule for commissioning and startup including sequencing of activities.</li><li>• Prioritize test packages to be developed to support overall schedule.</li><li>• Estimated duration of this activity is 2-3 months with full-time staffing.</li></ul>	
<b>III. FUNCTIONAL AND PERFORMANCE TEST PACKAGES (TASK 595)</b>	<b>\$145,950</b>
<ul style="list-style-type: none"><li>• Develop detailed test packages including final review /QC using documents and equipment submittals before releasing to the Contractor.</li><li>• Estimated duration of this activity is 6 months with full-time staffing.</li></ul>	

**ASSUMPTIONS AND EXCEPTIONS**

- *This scope of work does not include any effort for site management or execution of commissioning or startup activities.*

- *Work will be invoiced on an hourly basis using the attached rate schedule. Rates are valid through 2023.*
- *Direct expenses for reproduction, travel, express mail, and special deliveries will be invoiced at cost per the Master Agreement.*
- *Additional services requested by ARWA which may arise, and are not outlined above, to be compensated for on an hourly basis or negotiated to a lump sum fee.*

**SUMMARY**


I.	Project Management	Task 595	\$3,975
II.	Facility Startup and Performance Demonstration	Task 595	\$79,580
III.	Functional and Performance Test Packages	Task 595	\$145,950
		Total:	<u>\$229,505</u>

A budget increase of **\$229,505** is the estimated cost of Pape-Dawson's current understanding of the additional services identified above.

We appreciate the opportunity to work with you on this project. If you concur with this request, please acknowledge your approval by signing in the space provided below and returning this letter to our office. If you have any questions or need additional information, please do not hesitate to contact me at your earliest convenience.

Sincerely,  
Pape-Dawson Engineers, Inc.

**ACKNOWLEDGED & ACCEPTED**

  
Chris Noe, P.E.  
Vice President

Signature: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

**Attachment**

- Detailed Breakdown of Fees
- Resume – Jeff Haasch, P.E., PMP

**EXHIBIT A**  
**Detailed Fee Breakdown**

		Principal Engineer / Commissioning & Startup	Process / Commissioning Engineer II	Commissioning Specialist IV	Total Labor Hours	Subtotal / Task
		\$ 265.00	\$ 210.00	\$ 175.00		
<b>Task 1 - Project Management and Administration</b>						
1.1	Monthly Reporting and Project Administration	15	-	-	15	\$ 3,975.00
<b>Task 1 Subtotal</b>		<b>15</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>\$ 3,975.00</b>
<b>Task 2 - Develop Facility Startup and Performance Demonstration</b>						
2.1	Establish Systems & System Boundaries	4	10	40	54	\$ 10,160.00
2.2	Develop Equipment Lists for all Systems	4	10	40	54	\$ 10,160.00
2.3	Detailed Review of Equipment Specifications	20	20	40	80	\$ 16,500.00
2.4	Generate C&SU and Training Schedule	4	10	40	54	\$ 10,160.00
2.5	Generate C&SU Plan	20	30	120	170	\$ 32,600.00
<b>Task 2 Subtotal</b>		<b>52</b>	<b>80</b>	<b>280</b>	<b>412</b>	<b>\$ 79,580.00</b>
<b>Task 3 - Develop Functional and Performance Test Packages using Contract Documents and Equipment Submittals</b>						
3.1	Electrical Distribution (WTP)	5	10	40	55	\$ 10,425.00
3.2	HVAC (WTP)	3	6	24	33	\$ 6,255.00
3.3	Network Communications (WTP)	5	10	40	55	\$ 10,425.00
3.4	Security (WTP)	3	6	24	33	\$ 6,255.00
3.5	Raw Water Storage Tanks	1	2	8	11	\$ 2,085.00
3.6	Rapid Mix	2	4	16	22	\$ 4,170.00
3.7	Lime Slurry Storage and Feed	6	12	48	66	\$ 12,510.00
3.8	CO2 Storage and Feed	4	8	32	44	\$ 8,340.00
3.9	Filter 1	3	6	24	33	\$ 6,255.00
3.10	Filter 2	0.50	1	4	6	\$ 1,042.50
3.11	Filter 3	0.50	1	4	6	\$ 1,042.50
3.12	Filter 4	0.50	1	4	6	\$ 1,042.50
3.13	Filter 5	0.50	1	4	6	\$ 1,042.50
3.14	Filter 6	0.50	1	4	6	\$ 1,042.50
3.15	Ancillary Filter Equipment	1	2	8	11	\$ 2,085.00
3.16	Blowers	2	4	16	22	\$ 4,170.00
3.17	Sodium Hypochlorite Storage and Feed	7	14	56	77	\$ 14,595.00
3.18	Sodium Permanganate Storage and Feed	3	6	24	33	\$ 6,255.00
3.19	Clearwell	1	2	8	11	\$ 2,085.00
3.20	HSPS - Backwash Pumps	3	6	24	33	\$ 6,255.00
3.21	HSPS - Plant Water Pump System	2	4	16	22	\$ 4,170.00
3.22	HSPS - High Service Pumps	3	6	24	33	\$ 6,255.00
3.23	HSPS - Surge Suppression System	2	4	16	22	\$ 4,170.00
3.24	Flow Equalization Basin and Pumps	2	4	16	22	\$ 4,170.00
3.25	Plate Settler with Sludge Vacuum	2	4	16	22	\$ 4,170.00
3.26	Sludge Lobe Pumps and Drying Beds	2	4	16	22	\$ 4,170.00
3.27	Recycle Pump Station	2	4	16	22	\$ 4,170.00
3.28	Well No. 6	2	4	16	22	\$ 4,170.00
3.29	Well No. 7	0.50	1	4	6	\$ 1,042.50
3.30	Well No. 8	0.50	1	4	6	\$ 1,042.50
3.31	Well No. 9	0.50	1	4	6	\$ 1,042.50
<b>Task 3 Subtotal</b>		<b>70</b>	<b>140</b>	<b>560</b>	<b>770</b>	<b>\$ 145,950.00</b>
<b>Total Hours / Labor Cost Total</b>		<b>137</b>	<b>220</b>	<b>840</b>	<b>1,197</b>	<b>\$ 229,505.00</b>

# JH Engineering, LLC

Startup and Commissioning Manager

Civil and Mechanical Engineering and Consulting

---

## Jeff Haasch, PE, PMP

Commissioning and Start-up Engineer

### Education

BS, Mechanical Engineering, University of Nevada Las Vega, 2003

### Licenses/Registrations

Professional Engineer

Texas, #124113 (ME/CE)

Nevada, #019615 (ME/CE)

Arizona, #063407 (ME)

New Mexico, #023947 (CE)

Project Management Professional

Mr. Haasch has over 18 years of experience providing civil and mechanical engineering services for the water and wastewater industry. He specializes in commissioning and startup support services. Mr. Haasch also provides process mechanical and instrumentation design and review, process mechanical and plumbing pipe support design, seismic anchoring design, standard and special specification review and development, temporary pumping and conveyance systems, mechanical equipment performance testing, and more.

### Project Experience

**Southern Nevada Water Authority, Low Lake Level Pump Station, Lake Mead, NV [2017 – Present].** The Low Lake Level Pump Station (L3PS) is a \$650M, CMAR delivered, multi-phase project consisting of the planning, design and construction of a 1.02-bgd raw water conveyance system. The L3PS, once completed will supply up to 1.02-bgd to two water treatment facilities that provide drinking water to the City of Las Vegas and neighboring communities. The L3PS is being constructed to maintain sustainability of providing RW to SNWA's and the Las Vegas drinking water supply as Lake Mead's elevation continues to drop. This project includes the integration and the interconnection with approximately 2 miles of newly constructed 144" Aqueduct and will be tied into the existing 144" conveyance system. The project consists of thirty-two (32) 30 mgd, 15kV submersible vertical turbine pumps expandable to thirty-four (34), a supporting Electric Maintenance Building, an open top surge tank, a hydropneumatic tank, two 84" valve vaults, one 144" valve vault, and one 84" valve vault. The L3PS is expected to be online in Q1 2020. JHE is contracted to perform commissioning and startup of the L3PS

**City of Houston, Northeast Water Purification Plant, Houston, Texas, [2017 – Present].** The Northeast Water Purification Plant (NEWPP) is an approx. \$1.6B, 320 mgd, Progressive Design Build delivered regional, conventional, water treatment plant that will be delivered in three sequential phases project consisting of 4 individual 80 mgd trains. The project consists of constructing a new elevated 450 mgd RW Intake Pump Station approx. 300 yards off the shoreline of Lake Houston with dual 108" RW conveyance lines routed to the new facility location. Each of the trains will include Rapid Mix, Flocc/Sed basins, pre and post chemical feed, ozonation, and filtration. Potable water will be stored in one of four 12 mgd clearwells and distributed to the surrounding regional communities via two high service pump stations. JHE is contracted to represent the City of Houston as the Commissioning and Startup Subject Matter Expert.

# JH Engineering, LLC

Startup and Commissioning Manager

Civil and Mechanical Engineering and Consulting

---

## Other Experience and Highlights

### **City of Austin, Texas – Supervising Engineer [2016 – 2018].**

Mr. Haasch performed as Supervising Engineer for the City of Austin's water utility, Austin Water. Mr. Haasch was responsible for Facility Engineering related to Water Treatment Plants, Pump Stations, Reservoirs, and Longhorn Dam. Managed and responsible for a team of 7 Facility Engineers working together to deliver Capital Improvement Projects (CIP) Projects within Austin Water. Responsible for managing approximately \$200M of CIP budget over a typical 5 yr. cycle. Managed improvements for 5 Water Treatment Facilities, 40+/- Pump Stations and Reservoirs, and Longhorn Dam.

### **MWH Constructors, Broomfield, CO – Director of Commissioning and Start-up [2011 – 2016]**

Managed and directed all efforts related to Commissioning and Startup (C&SU) and O&M services including managing and directing a team of 6 to ensure the group is supporting our project management teams during the transition from construction to operating facilities. Developed project commissioning sequences and plans and integrated with the construction team for plan implementation. Developed budgets for the C&SU phase and for the estimating team when pursuing future work. Develop and review specifications for conducting C&SU services. Conducted performance reviews for direct reports. Coordinated and conducted weekly meetings both on site and remotely to ensure directives were being followed. Dynamic ability to "change hats" during discussions related to construction sequencing and how they are related to C&SU. Performed as Commissioning Manager at the project level on high profile projects experiencing significant construction related schedule/complexity challenges. Managed and directed the construction staff and commissioning team to complete the commissioning and startup of all systems and sub-systems working towards complete Plant startup. Extensively coordinated with the CM, EOR, Client and Plant O&M Staff. Coordinated with vendors and subcontractors to ensure their respective activities were conducted at the correct timing to coincide with the commissioning schedule and overall CPM schedule. Planned and conducted weekly C&SU coordination meetings with the construction staff, subcontractors, Engineer, and Owner. Developed and implemented Water Management plans to prevent adverse impacts to environmentally sensitive areas and accounted for water needs to complete required C&SU activities. Developed and implemented disinfection plans to meet project requirements complying with AWWA Standards. Responsible for managing commissioning documentation control such as O&M delivery, completion of testing packages, Asset Management, Warranty Management, Water Management, and Disinfection (when required). Responsible for operating the facility expansion during the Commissioning Phase of start-up. Capable of temporary system design, procurement, installation, management and optimization.

### **Key Projects Include:**

**Austin Water Utility; Water Treatment Plant 4 / Jollyville Transmission Main; Austin, TX - \$528.1M**

Roy Hill Iron Mine; Ore Processing Facility; Perth, Australia - \$27M

Pima County Regional Water Reclamation District, Ina Rd Plant Upgrade (Tres Rios WRF); Tucson, AZ - \$243M

Central Weber Sewer Improvement District; Waste Water Treatment Plant Expansion; Weber, UT - \$130M

### **MMC, Inc., Las Vegas, NV – Start-Up Manager / Project Manager / Project Engineer [2004 – 2011]**

General contractor for various water and waste water facility plants – greenfield, rehab and expansions. Provided full on-site construction management, project development, and problem resolution while in close communication and coordination with and between Client, EOR, CM Staff, Construction Inspectors, Subcontractors, and Suppliers. Responsible for the development, assembly, coordination, management, and implementation of commissioning procedures and start-up documentation for facility start-up. Projects in Utah and Nevada ranging from \$40M to \$120M.

**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

- F.4** Discussion and possible recommendation to the Board to approve Work Order #4 with HVJ South Central Texas – M&J, , Inc. for material testing on the Segment B Pipeline project. ~ *Graham Moore, P.E., Executive Director*
- 

Background/Information

The Authority entered into a Master Agreement with HVJ Associates for material testing on the Phase 1B Program after a Request for Qualifications process was followed. Work Order #1 was issued to HVJ in July 2021 for the Water Treatment Plant Project, Word Order #2 was for material testing at the Booster Pump Station and Delivery Points and Delivery Point #2 was for the Segment A pipeline.

The Executive Director negotiated the scope and fee for the materials testing for the Segment B project with HVJ. The effort was reviewed by the both the Owner's Representative and the Construction Management and Inspection teams to help ensure that all anticipated materials testing needs are included and largely follows the scope negotiated for Segment A. The Segment B proposal is less in fee than Segment A as it is assumed that many of the density tests collected for Segment B can be coordinated with those for Segment A – therefore redundant time and travel was not included.

Below are some of the key facts regarding the proposal:

<b>Firm:</b>	HVJ, Inc.
<b>Project:</b>	Segment B
<b>Fee:</b>	\$485,483
<b>Work Order Type:</b>	Hourly, Not-to-Exceed
<b>Duration:</b>	Thru 9/2023
<b>Project Manager:</b>	Jimmy Si

Attachment(s)

- ARWA Segment B Proposal dated May 5, 2022

**Technical Committee Decisions Needed:**

- Recommendation to the Board to approve Work Order #4 for Segment B material testing with HVJ.



4201 Freidrich Lane, Suite 110

Austin, Texas 78744

512.447.9081 Ph

512.443.3442 Fax

[www.hvj.com](http://www.hvj.com)

May 5, 2022

Mr. Graham Moore, PE  
Executive Director  
Alliance Regional Water Authority  
630 E. Hopkins  
San Marcos, Texas 78666

Re: ARWA Phase 1B – Pipeline Segment B  
Construction Phase Materials Engineering and Testing Proposal  
San Marcos, Texas  
HVJ Project No. AC2110020.4

Dear Mr. Moore:

Pursuant to your request, HVJ South Central Texas – M&J, Inc. (HVJ) is pleased to submit this proposal to provide Owner quality assurance testing for the above referenced project. This proposal reflects brief scope and fee for construction phase materials engineering and testing services following a brief review of project documents.

### **Project Description**

The Alliance Regional Water Authority Phase 1B Pipeline Segment B project consists of approximately 55,340 LF of 42-inch water and 28,550 LF of 36-inch water pipelines and associated appurtenances and connections. The pipelines are primarily constructed via open-cut methodology but feature trenchless/tunneled crossings of major creeks and roadways/highways, including a 775 LF tunneled crossing of State Highway 130.

### **Scope of Services**

The general scope of material testing and inspection services anticipated for this project is as follows.

- Soils, Base, Concrete and Grout Lab/Field Testing
- Steel Pipe – Weld Inspection & Testing

It is understood that materials testing and observations services were estimated on a call-out basis, where personnel will not be present full time during performance of the work unless requested to be present. ***However, where possible, HVJ-SCTx will work with the CM team to combine testing and inspection activities in an attempt to reduce the number of site visits needed.***

### **Cost Estimate**



ARWA Phase 1B – Pipeline Segment B

AC2110020.4

May 5, 2022

We recommend allocating a budget of **\$485,483** for construction materials testing and inspection for the proposed Phase 1B Pipeline Segment B. Summary of the materials testing and inspection budget fee is shown below.

<b>ARWA - Phase 1B Treated Pipeline Segment B - Materials Testing (Field Services - soils, concrete/grout)</b>				
<i>Description</i>	<i>Unit</i>	<i>Quantity</i>	<i>Rate</i>	<i>Total</i>
Tech Time - Soil Compaction, Concrete/Grout Testing	hour	1276	\$84	\$107,184
Overtime - Soil Compaction, Concrete/Grout Testing	hour	64	\$126	\$8,064
Nuclear Gauge	trip	319	\$55	\$17,545
Vehicle Charge	trip	319	\$80	\$25,520
			<b>Subtotal</b>	<b>\$158,313</b>
<b>ARWA - Phase 1B Treated Pipeline Segment B - Materials Testing (Lab Services - soils, aggregates &amp; concrete/grout)</b>				
<i>Description</i>	<i>Unit</i>	<i>Quantity</i>	<i>Rate</i>	<i>Total</i>
Soil/Base Sample Preparation	each	10	\$75	\$750
Atterberg Limits	each	10	\$75	\$750
Sieve Analysis (soils)	each	10	\$72	\$720
Proctors	each	10	\$275	\$2,750
Relative Density (gravel)	each	2	\$550	\$1,100
Sieve Analysis (bedding & rip rap)	each	2	\$95	\$190
Resistivity Test (soils)	each	2	\$125	\$250
Concrete & Grout Cylinder Compressive Strength	each	300	\$24	\$7,200
			<b>Subtotal</b>	<b>\$13,710</b>
<b>ARWA - Phase 1B Treated Pipeline Segment B - Weld Inspection</b>				
<i>Description</i>	<i>Unit</i>	<i>Quantity</i>	<i>Rate</i>	<i>Total</i>
Pipeline Inspector (CWI)	hour	1280	115	\$147,200
Pipeline Inspector - Overtime	hour	320	172.5	\$55,200
Magnetic Particle Equipment	trip	160	\$125	\$20,000
Vehicle Charge	trip	160	\$80	\$12,800
Reporting - Welding Inspection	each	160	\$100	\$16,000
			<b>Subtotal</b>	<b>\$251,200</b>
<b>ARWA - Phase 1B Treated Pipeline Segment B - Project Administration</b>				
<i>Description</i>	<i>Unit</i>	<i>Quantity</i>	<i>Rate</i>	<i>Total</i>
Project Manager, PE	hour	140	\$179	\$25,060
Task Leader (Deputy Project Manager)	hour	180	\$125	\$22,500
Admin	hour	180	\$65	\$11,700
			<b>Subtotal</b>	<b>\$59,260</b>
<b>ARWA - Phase 1B Treated Pipeline Segment B - Other Direct Expenses</b>				
<i>Description</i>	<i>Unit</i>	<i>Quantity</i>	<i>Rate</i>	<i>Total</i>
Air Quality Meter	each	1	\$1,000	\$1,000
Ultrasonic Paint Thickness Gauge	each	1	\$2,000	\$2,000
Other Reimbursable Expenses (cost + 10%)	-	-	-	-
			<b>Subtotal</b>	<b>\$3,000</b>
			<b>Total</b>	<b>\$485,483</b>

## Assumptions

The following assumptions were used in the preparation of this proposal:

- For soils and concrete/grout testing, 233 days for one tech and 86 days for second tech at 4 hrs/day are assumed.
- For welding inspections, 160 days at 10 hrs/day are assumed.
- Inspection of O Ring Connections will be performed by others.
- Field inspection of mortar lining and polyurethane coating is not included in this scope. The CWIs will be certified to measure polyurethane coating thickness of field repairs. When scheduled the previous day, the CWIs will perform thickness measurements of polyurethane coating and the only extra fees will be for equipment and reporting.
- 100% visual and 100% testing is assumed for field welds.
- All welds will be tested using the Magnetic Particle method.
- Retest and reinspection costs are not included in the estimate. We will reinspect/retest inside the daily fee as long as it doesn't cause the need to add more service days. As requested, reinspection/retest costs will be separated on invoices to ARWA.
- 1 business day advance notice will be required to schedule services.

This estimate was prepared based on a **11 month** pipe installation schedule with anticipated completion in April 2023. The cost estimate is based on our projections for both the construction schedule and the frequency of service requests from the Client. As the schedule and frequency of service requests are beyond our control, we cannot guarantee that the estimate provided herein will be adequate for the services needed through the entire duration of the construction of this project. We understand that advance authorization will be required if additional funds are needed to complete the testing per project specifications. HVJ will monitor the budget as the work proceeds and will keep you or your designated representative informed.

Scheduling of our personnel for this project will be at the request of you or your designated representatives. To ensure proper scheduling of the work, we require a minimum 24 hour notice (1 full business day, Monday-Friday) to provide on-call personnel.

Services will be invoiced on a unit fee basis in accordance with the attached Construction Phase Services Fee Schedule. Overtime rates of 1.5 times the regular hourly rates will be charged for time worked over 8 hours per day, hours worked before 6:00 AM or after 6:00 PM Monday through Friday, and all hours worked on Saturdays, Sundays and holidays.

## Limitations

Our work will be performed in a manner consistent with that level of care and skill ordinarily exercised by other members of HVJ's profession practicing in the same locality, under similar conditions and on the date the services are provided. Our conclusions, opinions and recommendations will be based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. HVJ makes no guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

This proposal was prepared specifically for the client and its designated representatives and may not be provided to others without HVJ's expressed permission.

ARWA Phase 1B – Pipeline Segment B

AC2110020.4

May 5, 2022

HVJ Associates® is pleased to submit this revised proposal for the proposed improvements. Should you have any questions regarding the contents of this proposal, please contact us at 512-447-9081.

Sincerely,

**HVJ South Central Texas – M&J, Inc.**

TBPE F-18091



Syed Jafar, P.E.

Executive Vice President

Enclosures:

Attachment A: Standard Fee Schedule (4 pages)

**HVJ SOUTH CENTRAL TEXAS  
CONSTRUCTION MATERIALS ENGINEERING AND TESTING SERVICES  
STANDARD FEE SCHEDULE**

Attachment A

**ALLIANCE REGIONAL WATER AUTHORITY MASTER FEE  
SCHEDULE**

CODE	DESCRIPTION	HOURLY RATES
1	Project Manager (PE)	\$ 179.00
2	Sr. Project Engineer(PE)	\$ 179.00
3	Project Engineer (PE)	\$ 150.00
4	Staff Engineer (EIT)	\$ 125.00
5	Certified Engineering Technician	\$ 84.00
6	Welding Inspector (CWI)	\$ 115.00
7	NDT Inspector (ASNT Level II)	\$ 125.00
8	NDT Inspector (ASNT Level III)	\$ 145.00
9	NACE Inspector Level I Coatings Inspector	\$ 115.00
10	Administrative	\$ 65.00
11	Vehicle Charge (per trip)	\$ 80.00
12	Nuclear Gauge (per trip)	\$ 55.00
13	Magnetic Particle Equipment (per trip)	\$ 125.00
14	Traffic Control	Cost + 10%

**MATERIAL TESTING**

**UNIT PRICE**

**100 Concrete Aggregates:**

101	Screen or Sieve Analysis (ASTM C-136 or Tex-110)	\$ 72.00
102	Specific Gravity (ASTM C-127 or C128)	\$ 51.00
103	Unit Weight (ASTM C-29)	\$ 45.00
104	Absorption (ASTM C-127 or C-128)	\$ 44.00
105	Finer than 200 Mesh (ASTM C-117)	\$ 49.00
106	Organic Impurities (ASTM C-40)	\$ 45.00
107	Scratch Hardness (ASTM C-851)	\$ 45.00
108	Abrasion Tests (ASTM C-131 or C-535)	\$ 215.00
109	Clay Lumps (ASTM C-142)	\$ 55.00
110	Light Weight Pieces (ASTM C-123)	\$ 61.00
111	Sand Equivalent (ASTM D-2419)	\$ 65.00
112	Sodium/Magnesium Sulfate Soundness (5 Cycles)	\$ 390.00
113	Sodium/Magnesium Sulfate Soundness Additional Cycles	\$ 175.00
114	Petrographic Examination of Concrete Aggregates (ASTM C-295)	By Quotation

**200 Concrete Mix Design Inspection and Testing**

201	Mix Design Review (using previously determined aggregate properties and other design factors) Excluding Test Costs	\$ 179.00
202	Trial Batch Tests (ASTM C-192) (Using aggregate admixtures and cement proposed for use in the project) each batch or each curve point	\$ 450.00
203	Cylinders (ASTM C-39) test or hold, each	\$ 24.00
204	Beam Test (ASTM C-78, C-293) or Hold, Each	\$ 55.00

**HVJ SOUTH CENTRAL TEXAS  
CONSTRUCTION MATERIALS ENGINEERING AND TESTING SERVICES  
STANDARD FEE SCHEDULE**

Attachment A

CODE	DESCRIPTION	UNIT PRICE
205	Concrete Coring (4" Dia Up to 6" Thickness) ASTM C-42 includes Personnel, Vehicle and Patching Holes	\$ 90.00
206	Measuring Thickness of Concrete Cores (ASTM C-174)	\$ 22.00
207	Additional Thickness (6"to 12")/ (Inch)	\$ 8.00
208	Additional Thickness (Over 12")/ (Inch)	\$ 10.00
209	Concrete Coring, Minimum Charge (Min. 3 Cores)/ (LS)	\$ 290.00
210	Preparation of Cores, Capping & Test (ASTM C42, C-39)	\$ 67.00
211	Cement Compressive Strength, one age (ASTM C-109)/(Set)	\$ 120.00
212	Cement Compressive Strength, two age (ASTM C-109)/ (Set)	\$ 127.00
213	Mortar/Grout Compressive Strength Cubes (ASTM C-109)	\$ 27.00
214	Mortar/Grout Compressive Strength 3" x 6" (ASTM C-495)	\$ 24.00
215	Mortar/Grout Compressive Strength Grout Prisms (ASTM C-1019)	\$ 55.00
216	Structural Coring	By Quotation
217	Windsor Probes (ASTM C-803)	\$ 79.00
218	Bar Linear Shrinkage/ (Set)	\$ 282.00
219	Unit Weight of Lightweight Cylinders/ (Set)	\$ 70.00
220	Split Tensile Strength including preparation (ASTM C-496)	\$ 94.00
221	Petrographic Examination of Hardened Concrete (ASTM C-856)	By Quotation
222	Concrete Shrinkage Test (ASTM C-157, C-490)/ (Test)	\$ 138.00

**800 Asphalt Concrete Mix Design & Inspection**

801	Mix Design Review (using previously determined aggregates properties and other design factors) Excluding Test Costs	\$ 187.00
802	Trial Batch Test (up to 5 curve points)	\$ 1,403.00
803	Additional Curve Points for item 802, Per Point	\$ 202.00
804	Extraction & Gradation Test (ASTM D-2172, ASTM C-136 or TEX - 210F)	\$ 174.00
805	Specific Gravity (ASTM D-2041 TEX 201F)	\$ 75.00
806	Stability: Hveem (3 Per Set) (ASTM D-1559)	\$ 125.00
807	Bulk Density of Lab Molded or Field Specimen (Core), (TEX - 207F)/(Set)	\$ 75.00
808	Molding Specimens (3 Per Set) for 806 & 807 (ASTM D-1560, TEX-208F)/(Set)	\$ 125.00
809	Penetration (ASTM D-5)	\$ 74.00
810	Ductility (ASTM D-113)	\$ 99.00
811	Viscosity (ASTM D-2170)	\$ 82.00
812	Asphalt Coring (4" Dia Up to 6" Thickness) includes Personnel, Vehicles and Patching Holes	\$ 80.00
813	Asphalt Coring Minimum Charge/ (LS)	\$ 290.00
814	Additional Thickness over 6"/ (Inch)	\$ 7.00

**HVJ SOUTH CENTRAL TEXAS  
CONSTRUCTION MATERIALS ENGINEERING AND TESTING SERVICES  
STANDARD FEE SCHEDULE**

Attachment A

CODE	DESCRIPTION	UNIT PRICE
815	Abson Recovery (TEX-211F)	\$ 281.00
816	Measuring Thickness of Asphalt Cores	\$ 8.00
817	Maximum Theoretical Specific Gravity (TEX 227F)	\$ 115.00
818	Hot Mix In-Place Asphalt Design	\$ 1,870.00
819	Apparent Specific Gravity (TEX 227F)	\$ 58.00
820	Moisture Susceptibility Test (TEX 531C)	\$ 409.00
821	PMA Extraction/Gradation (ASTM D-2172)	\$ 234.00
822	PMA Extraction/Gradation by Ignition (ASTM D-2928)	\$ 145.00

**1000 Soils Tests:**

	Liquid and Plastic Limits: (Atterberg Limits) (ASTM D-4318, Tex 104E, 105E, 106E)	
1001		\$ 75.00
1002	Moisture Content Only (ASTM D-2216)	\$ 15.00
1003	Mechanical Sieve Analysis, Through #200 Sieve (ASTM D-422)	\$ 72.00
1004	Percent Passing #200 Sieve (ASTM D-1120)	\$ 65.00
1005	Specific Gravity (ASTM D-854 & D-204)	\$ 51.00
1006	OMD Standard Compaction (ASTM D-698, Tex-114E)	\$ 275.00
1007	OMD Modified Compaction (ASTM D-1557, Tex-113E)	\$ 275.00
1008	OMD Lime or Cement Stabilized Soil (ASTM D-698, D-558, D-1557, Tex121E)	\$ 275.00
1009	California Bearing Ratio (ASTM D-1883)	\$ 185.00
1010	Percent Solids in Lime Slurry /(Test)	\$ 37.00
1011	Four Point Lime Content Recommendation Series (Pl)/(Set)	\$ 250.00
1012	Cement Content of Freshly Mixed CSS Mixture (ASTM D-806)	\$ 269.00
1014	Comp. Strength of CSS Sample, Including Molding (ASTM D-1632 & D-1633)	\$ 61.00
1015	Maximum & Minimum Density (Sands) (ASTM D-4254)/ (Test)	\$ 275.00
1016	Density and Moisture of Soil Sample	\$ 19.00
1017	Unconfined Compression (ASTM D-2166)	\$ 39.00
1018	Unconsolidated Undrained (ASTM D-2850)	\$ 54.00
1019	Consolidation (One cycle) (ASTM D-2435)	\$ 310.00
1020	Consolidation - Additional Increments	\$ 44.00
1021	Ph of Soil (ASTM D-4972)	\$ 45.00
1022	Optimum Lime Content Ph Method	\$ 225.00
1023	Sieve Analysis - Base Materials (ASTM C-136)	\$ 85.00
1024	Compressive Strength of Cement Stabilized Base Materials, (TEX-120E, ASTM D-2166)	\$ 275.00
1025	Soil Shrinkage Factor (ASTM D-427)	\$ 54.00
1026	One Dimensional Swell Cohesive Soils	\$ 251.00
1027	Triaxial Testing	By Quotation

**HVJ SOUTH CENTRAL TEXAS  
CONSTRUCTION MATERIALS ENGINEERING AND TESTING SERVICES  
STANDARD FEE SCHEDULE**

Attachment A

1028	Permeability Test, Constant Head Method (ASTM D-2434)	\$	225.00
1029	Pinhole Test	\$	246.00
1030	Crumb Test (ASTM D-4647)	\$	33.00
1031	Double Hydrometer (ASTM D-4221)	\$	152.00
1032	Free Swell (FHA)	\$	75.00
1033	Soil Suction - Filter Paper Method	\$	49.00

**1300 Reimbursable Expenses:**

1301	Reimb Expenses Including Outside Testing, Equipment and Supplies		Cost + 10%
------	--	--	------------

**General Notes**

\*Services on an hourly basis will be invoiced based on unit rates presented above. Overtime rates of 1.5 times the regular hourly rates will be charged for time worked over 8 hours or before 6:00 AM or after 6:00 PM on Monday through Friday, and all hours worked on Saturdays, Sundays, or holidays.

\*A minimum charge of four (4) hours applies to time worked less than four hours in any service call. HVJ, when possible will combine inspection and testing activities to minimize trip charges and labor expenses.

\*Services will be invoiced from portal to portal including on-site time.

**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

- F.5** Discussion of the draft Authority budget for FY 2022-23; and possible direction to staff. ~ *Graham Moore, P.E., Executive Director*
- 

Status of FY 21-22 Budget

Staff is currently projecting where revenues and expenditures will be at the end of the year. There are no concerns about staying within the adopted budget. More details on the status will be provided at the next meeting.

FY 22-23 Budget

Staff is developing the FY 2022-23 budget. In June the full draft budget will be presented that will include all projected expenditures, including Operations and Maintenance expenditures such as electrical and chemical costs, software licensing, etc.

**Technical Committee Decisions Needed:**

- None.



**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

**F.6** Update and possible direction to Staff regarding the Authority's infrastructure during the February 2022 winter freeze. ~ *Jason Biemer, Director of Operations*

---

Background/Information

Mr. Samford requested a presentation as to how the Authority's infrastructure fared during the February 2022 winter freeze.

Attachment(s)

- Cold Weather Post Event Review

**Technical Committee Decisions Needed:**

- None.

# Cold Weather Post Event Review



Wednesday February 2, 2022  
through Monday February 7, 2022

## Conditions Summary



Minimum Temperature of 18°F



Maximum Temperature of 61°F



Ice buildup ranged from near 0" to 3/8"



Winds out of the north exceeding 30 mph



Precipitation totaled approximately 2.4" as temperatures dropped below freezing.



Additional precipitation fell as sleet and snow.

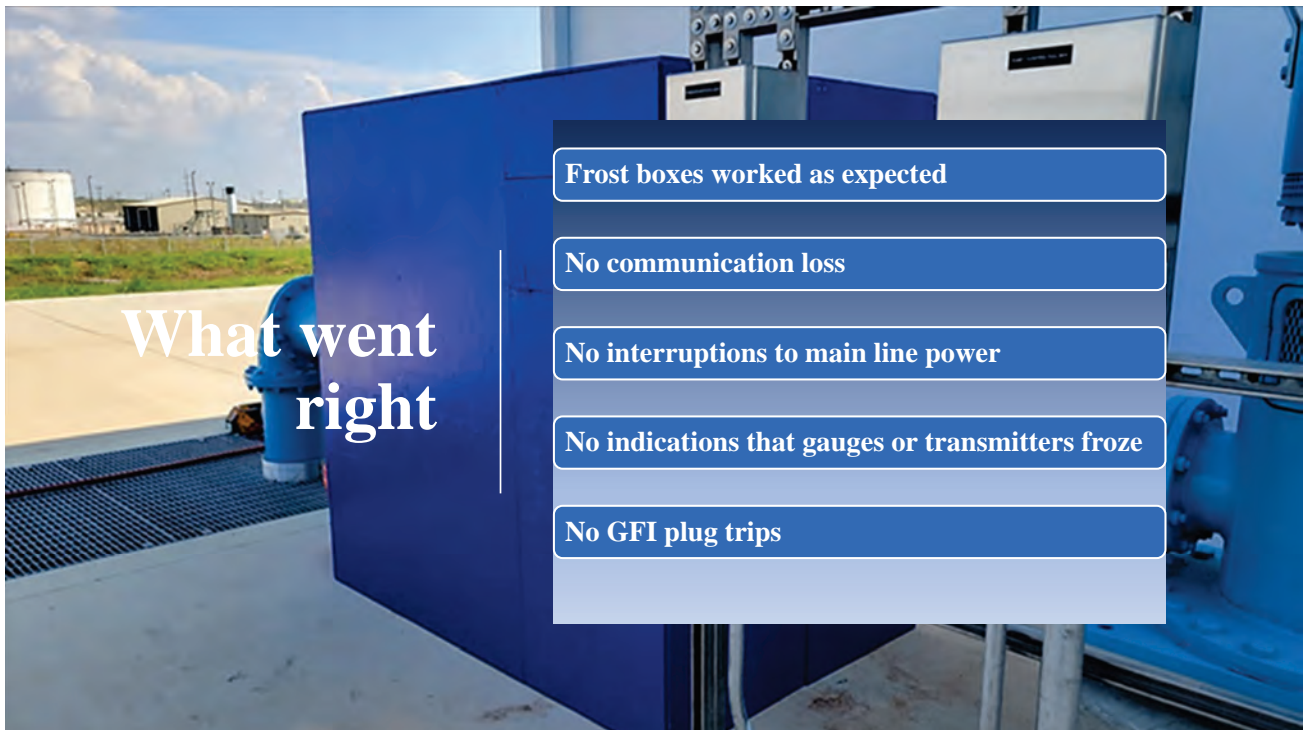




## What went wrong

Electric gate was completely iced over and inoperable.

Minor check valve leak on backup chlorine feed line.



## What went right

Frost boxes worked as expected

No communication loss

No interruptions to main line power

No indications that gauges or transmitters froze


No GFI plug trips

# Moving forward

Confirmed Standard Operating Procedure for cold weather is acceptable.



Main gate access is susceptible to heavy icing. A spray deicing agent has been identified for use on the gate in the event critical access through it is required. Alternate access gates inherently more resilient to ice effects.



A backup check valve assembly will be acquired and stored on site.

**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

- F.7** Update on status of groundwater management in project target area, and Gonzales County Underground Water Conservation District, Plum Creek Conservation District, Groundwater Management Area 13, Region L Planning Group, Guadalupe-Blanco River Authority, Hays County and CAPCOG activities.  
~ *Graham Moore, P.E., Executive Director*
- 

Gonzales County Underground Water Conservation District (GCUWCD)

The GCUWCD is scheduled to meet on May 10th.

Plum Creek Conservation District (PCCD)

The PCCD is scheduled to meet on May 17th.

Groundwater Management Area 13

GMA-13 is in the process of adopting the current round of DFCs. Each groundwater district is scheduling public hearings on the DFCs.

Region L Planning Group

Region L held a meeting on May 5th. The planning process is still in the early stages with more pertinent information to begin coming in 2023 starting with water demand projections.

Guadalupe-Blanco River Authority; Hays County Activities; CAPCOG Activities

No update.

**Technical Committee decision needed:**

- None.

**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

- G. EXECUTIVE DIRECTOR REPORT** - Update on future meeting dates, locations, consultant invoices paid, approved changed orders, status of Authority procurements, Executive Director activities and other operational activities where no action is required. ~ *Graham Moore, P.E., Executive Director*

Construction Management & Inspection

- Two invoices have been submitted for Work Order #6 with Pape-Dawson. The total amount spent represents 10.87% of the contract whereas 18.2% of the time has elapsed. The percent of time spent on project management and by senior staff is trending lower with more time being spent by field representatives. There are currently no concerns regarding the ability to complete within the contract.

Consultant Invoices Paid

- Below are reports on the consultant invoices paid in April.

**FY 21-22 CONSULTANT INVOICES PAID IN APRIL 2022**

<b>Consultant</b>	<b>Total Authorized</b>	<b>Current Invoice</b>	<b>Invoiced-to-Date</b>	<b>% of Contract Invoiced</b>	<b>Remaining</b>	<b>Notes/Anomalies</b>
RW Harden	\$30,000.00	\$456.25	\$7,866.33	26%	\$22,133.67	
Kent Alan Sick - ROW Legal	\$30,000.00	\$0.00	\$0.00	0%	\$30,000.00	
LNV - GIS Svcs	\$1,590.88	\$0.00	\$0.00	0%	\$1,590.88	
Armstrong, Vaughan & Associates, P.C.	\$10,930.00	\$0.00	\$10,930.00	100%	\$0.00	
J.R. Tolles & Associates, Inc.	\$255,000.00	\$18,569.00	\$109,212.40	43%	\$145,787.60	
Lloyd Gosselink Rochelle & Townsend	\$125,000.00	\$15,460.51	\$44,220.88	35%	\$80,779.12	
CD&P - Public Relations	\$50,000.00	\$3,410.25	\$27,588.11	55%	\$22,411.89	
Law Offices of Patricia Erlinger Carls	\$22,284.70	\$0.00	\$0.00	0%	\$22,284.70	
Schlueter Group of Texas, LLC	\$45,000.00	\$5,000.00	\$20,000.00	44%	\$25,000.00	
<b>Total</b>	<b>\$524,805.58</b>	<b>\$37,896.01</b>	<b>\$199,817.72</b>		<b>\$324,987.86</b>	

- On the following page is the report on the Phase 1B invoices paid in April.

**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

**PHASE 1B FY 20-21 CONSULTANT INVOICES PAID IN APRIL 2022**

Consultant	Total Authorized	Current Invoice	Invoiced-to-Date	% of Contract Invoiced	Remaining	Notes/ Anomalies
Kimley-Horn Ph 1B Owner's Rep WO5	\$1,211,382.72	\$261,003.80	\$902,178.05	74%	\$309,208.67	
Blanton - Environmental	\$1,184,938.15	\$138,407.47	\$383,589.04	31%	\$821,349.11	
LAN - Segment A	\$37,197.04	\$2,015.93	\$30,419.01	82%	\$6,778.03	
LAN - Segment A Construction	\$805,957.91	\$18,050.00	\$41,773.62	7%	\$584,184.29	
KFA - Segment B	\$89,769.42	\$3,075.00	\$62,084.18	69%	\$27,685.28	
BGE - Segment C Prelim	\$15,099.24	\$0.00	\$0.00	0%	\$15,099.24	
BGE - Segment C	\$147,053.89	\$17,815.00	\$33,239.38	23%	\$113,814.51	
FNI - Segment D Prelim	\$81,533.66	\$0.00	\$0.00	0%	\$81,533.66	
FNI - Segment D Final	\$119,140.78	\$8,573.21	\$104,201.52	87%	\$14,939.26	
Walker - Segment E Prelim	\$38,153.24	\$0.00	\$0.00	0%	\$38,153.24	
Walker - Segment E Final	\$311,815.35	\$29,378.33	\$84,322.14	21%	\$247,493.21	
LAN - ROW	\$741,441.42	\$33,228.67	\$185,740.46	22%	\$575,700.98	
DTR&G	\$2,000,000.00	\$0.00	\$662,995.54	33%	\$1,337,004.46	
CBRE - Appraisals	\$943,090.00	\$105,120.00	\$304,500.00	32%	\$838,590.00	
CP&Y - Survey	\$357,734.00	\$0.00	\$130,063.00	36%	\$227,671.00	
RW Harden - WDH Const Admin	\$12,470.00	\$0.00	\$8,004.00	64%	\$4,466.00	
LNV - RWI	\$113,027.50	\$0.00	\$5,370.00	5%	\$107,657.50	
FNI - BPS Final	\$230,036.10	\$1,237.39	\$1,462.37	1%	\$228,573.73	
Plummer - Inline Elevated Tank Prelim	\$3,730.07	\$0.00	\$0.00	0%	\$3,730.07	
Plummer - Inline Elevated Tank Final	\$290,663.43	\$6,585.87	\$28,950.76	9%	\$283,712.67	
Pape-Dawson - CM&I WO#5	\$1,501,376.61	\$0.00	\$935,095.71	62%	\$566,280.90	
Pape-Dawson - CM&I WO#6	\$5,601,900.00	\$283,959.23	\$283,959.23	5%	\$5,317,940.77	
Hicks & Co - WDH Environmental	\$15,571.00	\$0.00	\$0.00	0%	\$15,571.00	
Walker Partners - WTP CA Svcs	\$1,253,702.22	\$25,693.63	\$201,832.11	16%	\$1,051,870.11	
LNV/Ardurura - RWI CA Svcs	\$340,160.00	\$0.00	\$14,704.50	4%	\$325,455.50	
FNI - BPS CA Svcs	\$494,734.50	\$19,410.88	\$43,486.28	9%	\$451,248.22	
CP&Y - SCADA Programming Svcs	\$821,470.94	\$22,590.00	\$175,865.54	21%	\$645,605.40	
HVJ - Materials Testing (WTP)	\$473,148.75	\$0.00	\$40,825.75	9%	\$432,323.00	
HVJ - Materials Testing (BPS)	\$131,259.00	\$0.00	\$19,173.00	15%	\$112,086.00	
HVJ - Materials Testing (Segment A)	\$730,665.00	\$0.00	\$0.00	0%	\$730,665.00	
<b>Total</b>	<b>\$19,878,221.94</b>	<b>\$971,944.21</b>	<b>\$4,621,833.17</b>	<b>23%</b>	<b>\$15,256,388.77</b>	

**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

Approved Change Orders

- No Consultant changes were issued in April 2022.
- Below are the approved change orders to date on the Phase 1B construction projects:

Change Order Tracking					
ARWA Phase 1B Water Treatment Plant					
CO #	Short Description	Total Cost	GBRA's Cost	ARWA Cost	Basis for Split
CO001	Construction Access Road	\$ 249,606.00	\$ 148,141.16	\$ 101,464.84	Overall WTP Split
CO002	Prestressed Concrete Tank Changes	\$ 71,390.00	\$ 48,959.26	\$ 22,430.74	Water Storage & Pumping - Prestressed Water Storage Tank
CO003	CO2 Feed Pump Size	\$ 15,454.00	\$ 8,912.32	\$ 6,541.68	Chemical Pre-Treatment - CO2 System
<b>TOTAL</b>		<b>\$ 336,450.00</b>	<b>\$ 206,012.74</b>	<b>\$ 130,437.26</b>	

Design Consultant: Walker Partners  
Contractor: Archer-Western

Change Order Tracking					
ARWA Phase 1B Booster Pump Station & Delivery Points					
CO #	Short Description	Total Cost	GBRA's Cost	ARWA's Cost	Basis for Split
CO001	Engineer's Field Office	\$ (23,604.00)	\$ (13,279.61)	\$ (10,324.39)	Bid Item A-01 Cost Split
CO002	Replace butterfly valves with gate valves	\$ (29,468.29)	\$ (16,578.86)	\$ (12,889.43)	Bid Item A-01 Cost Split
<b>TOTAL</b>		<b>\$ (53,072.29)</b>	<b>\$ (29,858.47)</b>	<b>\$ (23,213.82)</b>	

Design Consultant: Freese & Nichols  
Contractor: MWH



**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

- H.** COMMITTEE MEMBER ITEMS OR FUTURE AGENDA ITEMS – Possible acknowledgement by Committee Members of future area events and/or requests for item(s) to be placed on a future agenda where no action is required.

---

Background/Information

The Committee Members have an opportunity to make announcements or to request that items be added to future Board or Committee agendas.

**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

I.1 *Executive Session pursuant to the Government Code, Section 551.071 (Consultation with Attorney) and/or Section 551.072 (Real Property Deliberations) regarding:*

- A. *Water supply partnership options*
  - B. *Groundwater leases*
  - C. *Acquisition of real property for water supply project purposes*
-

**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

**I.2** Action from Executive Session on the following matters:

- A. *Water supply partnership options*
  - B. *Groundwater leases*
  - C. *Acquisition of real property for water supply project purposes*
-

**REGULAR MEETING**  
**Alliance Regional Water Authority Technical Committee**

**COMMITTEE MEMBER PACKETS**

Wednesday, May 11th, 2022 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 982 8616 3170; Code: 495028

**J. ADJOURNMENT**

---