

**Alliance Regional Water Authority  
Technical Committee**

**REGULAR MEETING**



**ALLIANCE WATER**

**COMMITTEE MEMBER PACKETS**

Wednesday, September 8th, 2021 at 3:00 P.M.

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

Meeting ID: 968 4666 2936

Passcode: 344864

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

**COMMITTEE MEMBER PACKETS**

Wednesday, September 8th, 2021 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 968 4666 2936; Code: 344864

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, September 8, 2021. 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: 968 4666 2936

Passcode: 344864

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 September 8, 2021. 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 August 20, 2021. ~ *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 the Authority's Phase 1B program. ~ *Ryan Sowa, P.E., Kimley-Horn & Associates*

F.2 Update, discussion and possible direction to Staff regarding the Solar System Analysis on the Authority's Water Treatment Plant Property. ~ *Nathan Cobler, P.E., Kimley-Horn & Associates*

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- F.3 Discussion and possible direction to Staff regarding Considerations for Operations of the Authority's Water System. ~ *Graham Moore, P.E., Executive Director*
- F.4 Discussion of legislative issues for the 87th Texas Legislature Special Session #2, and possible direction to Staff. ~ *Graham Moore, P.E., Executive Director*
- F.5 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:*
    - A. *Water supply partnership options*
    - B. *Groundwater leases*
    - C. *Acquisition of real property for water supply project purposes*
    - D. *Phase 1B Segment A competitive sealed proposals*
  - 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*
    - D. *Possible direction to Staff regarding the Phase 1B Segment A competitive sealed proposals*

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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.*

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**A. CALL TO ORDER**

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No Backup Information for this Item.

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**B. ROLL CALL**

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<u>NAME</u>	<u>PRESENT</u>
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Blake Neffendorf

James Earp

Tyler Hjorth

Humberto Ramos

Tim Samford

Regina Franke

<u>NON-VOTING MEMBERS</u>	<u>PRESENT</u>
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Mayor Lee Urbanovsky

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**C. PUBLIC COMMENT PERIOD**

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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.

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**D. CONSENT AGENDA**

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



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**D.1** Consider approval of minutes of the Technical Committee Meeting held August 20, 2021. ~ *Graham Moore, P.E., Executive Director*

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Attachment(s)

- 2021 08 20 Technical Committee Meeting Minutes

**Technical Committee decision needed:**

- Approval of minutes.



## ALLIANCE WATER

### Alliance Regional Water Authority

### TECHNICAL COMMITTEE MEETING

### MINUTES

**Friday, August 20, 2021**

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 Friday, August 20, 2021 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 1:01 p.m. by Mr. Earp.**

B. ROLL CALL.

- **Present: Neffendorf, Earp, Ramos, Samford and Franke.**
- **Absent: San Marcos Vacant Seat and Urbanovsky.**

C. PUBLIC COMMENT PERIOD

- **None.**

D. CONSENT AGENDA

D.1 Consider approval of minutes of the Regular Technical Committee Meeting held July 14, 2021.

- **Motion to adopt the minutes as presented was made by Mr. Earp, seconded by Mr. Ramos 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 the Authority's Phase 1B program.
- **Mr. Sowa provided an update on the Phase 1B program.**
  - **Mr. Ramos asked if the Supplemental Services on the Freese & Nichols work order included work for the added Kyle Delivery Point.**
  - **Mr. Sowa responded that it does not because the delivery point is not far enough along to incorporate. That work would require an additional authorization.**
  - **No Action.**
- F.2 Update, discussion and possible direction to Staff regarding the Authority's Phase 1B program recent bid openings.
- **Mr. Moore made a presentation on the recent bid openings.**
  - **No Action.**
- F.3 Possible recommendation to the Board to contingently award a construction contract for the Authority's Phase 1B Booster Pump Station and Delivery Points Project.
- **Motion to recommend to the Board to contingently approve award a construction contract for the Authority's Phase 1B Booster Pump Station and Delivery Points Project to MWH Constructors with the use of ductile iron pipe for yard piping and the 5 million gallon ground storage tank, was made by Mr. Earp, seconded by Mr. Ramos and approved on a 5-0 vote.**
- F.4 Possible recommendation to the Board to authorize a Work Order with Freese and Nichols, Inc. for construction administration services on the Authority's Phase 1B Booster Pump Station and Delivery Points Project.
- **Motion to recommend to the Board the approval of a Work Order with Freese & Nichols, Inc. for construction administration services on the Authority's Phase 1B Booster Pump Station and Delivery Points Project was made by Mr. Neffendorf, seconded by Mr. Earp and approved on a 5-0 vote.**
- F.5 Possible recommendation to the Board to authorize a Work Order with CP&Y, Inc. for SCADA programming services for the Authority's Phase 1B infrastructure.
- **Mr. Neffendorf asked how the fee amount compares to the budget.**
  - **Mr. Moore stated that the budget included \$1,000,000 for this effort.**

- **Motion to recommend to the Board approval of a Work Order with CP&Y, Inc. for SCADA Programming Services was made by Mr. Ramos, seconded by Mr. Neffendorf and approved on a 5-0 vote.**
- F.6 Discussion and possible direction to Staff regarding Considerations for Operations of the Authority's Water System.
- **Mr. Moore presented the overall analysis to be performed for the Considerations of Operations of the Water System.**
  - **No Action.**
- F.7 Discussion of legislative issues for the 87th Texas Legislature Special Session #1, and possible direction to Staff.
- **Mr. Moore provided an update on the current session and legislation.**
  - **No Action.**
- F.8 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
- **No Items.**
- I. EXECUTIVE SESSION
- I.1 The Technical Committee recessed into Executive Session at 1:55 p.m. pursuant of the Government Code, Section 551.071, to seek the General Counsel's advice regarding matters involving attorney-client privilege, and/or Section 551.072 to discuss water supply project partnership options. The Technical Committee reconvened from Executive Session at 2:46 p.m.
- 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
  - D. Possible direction to Staff regarding the Phase 1B Segment A competitive sealed proposals
- **No Action.**

J. ADJOURNMENT

- Meeting was adjourned at 2:47 p.m. by Mr. Earp.

**APPROVED:** \_\_\_\_\_, 2021

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- F.1** 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 – September 8, 2021
- Kimley-Horn Monthly Summary of Activities for August 2021

**Technical Committee Decisions Needed:**

- None.



# Phase 1B Program Update

Technical Committee Meeting  
September 8, 2021



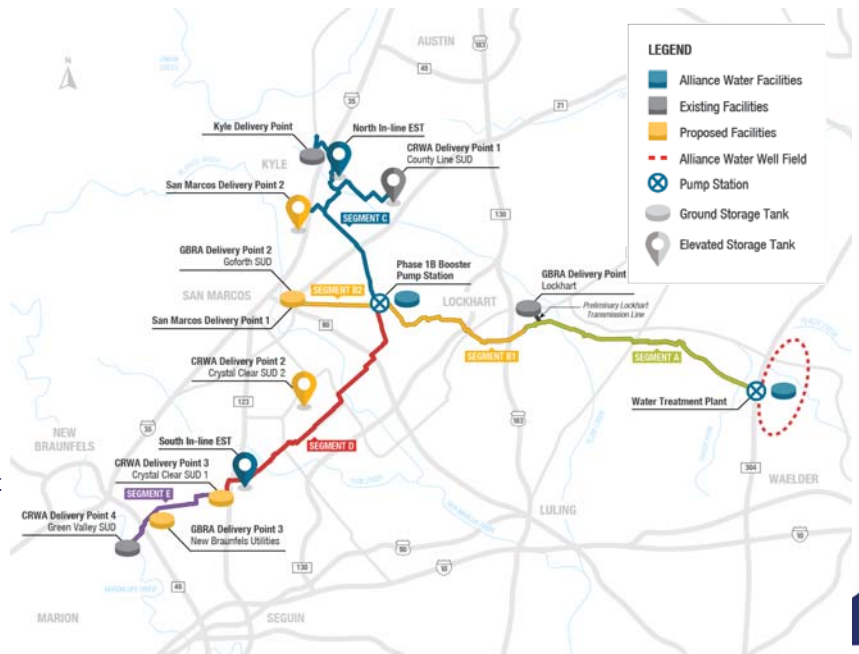
**ALLIANCE WATER**

PRESENTED BY **Kimley»Horn**  
Expect More. Experience Better.

## Ongoing Progress

### ► Design Milestone Status

- Design Submittals
  - Surge Analysis Updates – September/October
  - Pipeline Segment C (100%) – September
  - Pipeline Segment E (100%) – September
  - Inline EST (60%) – September
- TWDB Reviews
  - Segment A
    - Approved for Procurement
    - Following Board Approval, Begin Contract Execution Process
  - Booster Pump Station & Delivery Points
    - Approved for Procurement
    - Contracts being Executed for Submittal
  - Segment B
    - Engineering Feasibility Report, Environmental Data Report, and Plans/Specifications Under Review



# Ongoing Progress

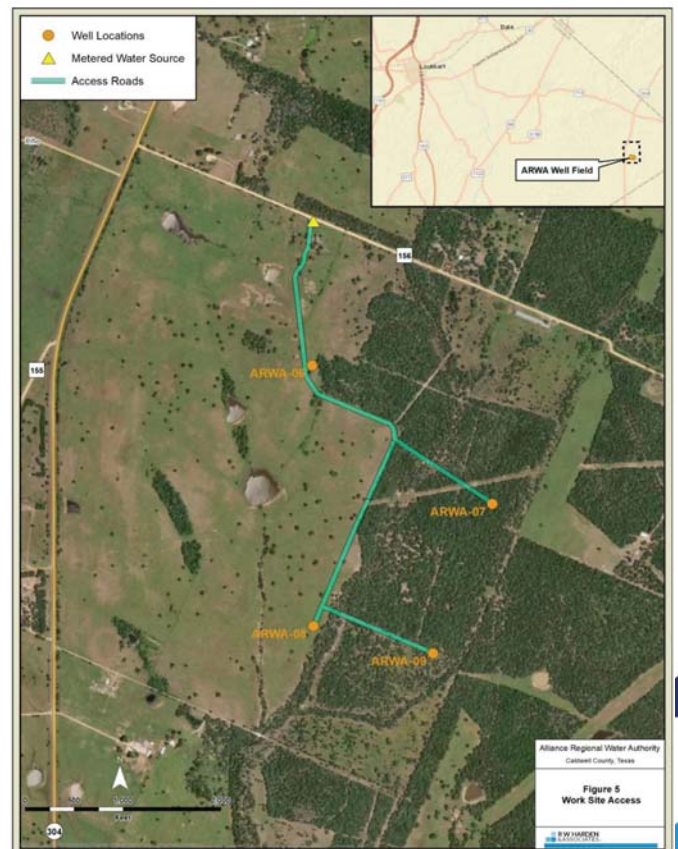
## ► Procurement / Construction Status

- Pipeline Segment A / Booster Pump Station & Delivery Points
  - Anticipated NTP – Mid-October
- Pipeline Segment B
  - Preparing for Procurement
- Water Treatment Plant & Raw Water Infrastructure
  - Upcoming work
    - Continued site clearing
    - Temporary access
    - Structure subgrade preparation



# Well Drilling Construction Progress

- Actual Progress (last 30 days)
  - All Wells Finalized
  - Well Pads Poured
  - Substantial Completion Walkthrough
- Anticipated Progress (next 2 weeks)
  - Address Walkthrough Punchlist
  - Demobilize





# 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	3	3	36
B	52	0	0	0	0	20	20	32
D	57	0	0	6	6	31	37	20
C	74	15	28	4	47	18	65	9
E	37	10	4	1	15	19	34	3
Well Field	20	17	0	0	17	3	20	0
<b>Total</b>	<b>279</b>						<b>179</b>	<b>100</b>



## Budget Update

## COST UPDATES BASED ON AUGUST MILESTONE SUBMITTALS

Construction Package		ORIGINAL (FEB. 2019) ARWA Total Projected Cost	REVISED ARWA Total Projected Cost	DIFFERENCE
<b>Submittal (%) Combined Program Infrastructure</b>				
Const.	Water Treatment Plant	\$ 25,200,000	\$ 29,600,000	\$ 4,400,000
Const.	Booster Pump Station & GBRA Meter Stations	\$ 12,100,000	\$ 13,200,000	\$ 1,100,000
30	Inline EST (South)	\$ 3,600,000	\$ 3,600,000	\$ 0
100	Pipeline Segment A	\$ 27,200,000	\$ 26,400,000	(\$ 800,000)
100	Pipeline Segment B	\$ 27,100,000	\$ 32,400,000	\$ 5,300,000
100	Pipeline Segment D	\$ 36,300,000	\$ 37,700,000	\$ 1,400,000
90	Pipeline Segment E	\$ 9,500,000	\$ 10,300,000	\$ 800,000
	<b>Subtotal</b>	<b>\$141,000,000</b>	<b>\$153,200,000</b>	<b>\$ 12,200,000</b>
<b>ARWA-Only Infrastructure</b>				
Const.	Well Drilling	\$ 3,800,000	\$ 3,300,000	(\$ 500,000)
Const.	Raw Water Infrastructure	\$ 7,000,000	\$ 10,700,000	\$ 3,700,000
Const.	ARWA Booster Pump Station & Delivery Points	\$ 7,700,000	\$ 4,800,000	(\$ 2,900,000)
30	Inline EST (North)	\$ 5,400,000	\$ 6,600,000	\$ 1,200,000
60	Pipeline Segment C	\$ 64,500,000	\$ 62,500,000	(\$ 2,000,000)
90	Pipeline Segment E (ARWA-Only)	\$ 6,700,000	\$ 11,400,000	\$ 4,700,000
No Design	Administration and Operations Building	\$ 4,300,000	\$ 4,200,000	(\$ 100,000)
	<b>Subtotal</b>	<b>\$ 99,400,000</b>	<b>\$103,500,000</b>	<b>\$ 4,100,000</b>
	<b>Total</b>	<b>\$240,400,000</b>	<b>\$256,700,000</b>	<b>\$16,300,000</b>

SEPTEMBER 2021 UPDATE

CHANGE FROM  
AUGUST UPDATE **\$200,000**

NOTE: PIPELINE COST PROJECTIONS ARE UNDER REVIEW AND ARE BEING UPDATED BY DESIGN CONSULTANTS



# Questions?

September 03, 2021

## Project Monthly Summary

### August 2021 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 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 Land Acquisition Cost Presentation.
  - Prepared and presented the monthly Budget Update for the Board meeting.
  - 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 and Design Consultants.
  - Coordinated with Program team to integrate each project schedule into overall Program schedule. Developed and distributed the monthly Program schedule summary.
  
- Task 6 – Data Management
  - 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 United States Army Corps of Engineers.
  - Coordinated with the Program Environmental Consultant regarding Inline Elevated Storage Tank site field work.
  - 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.
  - Monthly progress meeting and ongoing coordination with Program Environmental Consultant.

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

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- 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, D, 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.
  
- Task 10 – Design Standards
  - Revised and distributed the Pipeline Construction Standards based on comments received during Segment A and BPS Advertising.
  
- Task 11 – Engineering Design Management
  - Pipelines:
    - Segment A
      - Continued coordination with Design Consultant for final design and procurement development.
    - Segment B
      - Continued coordination with Design Consultant for final design and preparation for bidding.
    - Segment C
      - Continue coordination with Design Consultant.
      - Continued coordination with Design Consultant regarding ongoing field work and pipeline alignment considerations as part of right-of-entry process and EFR development.
    - Segment D
      - Continued coordination with Design Consultant for final design and preparation for bidding.
    - Segment E



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

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- Reviewed and provided input on the bid proposals received for Segment A and BPS.
- On-going coordination with WTP and RWI Design Consultants during the construction phase.
- Task 16 – Other Services
  - Finalized and presented the additional solar analysis and memo addressing ARWA’s comments.
  - Solar Evaluation
    - Begin preparation of status update.
  - Commissioning Planning
    - Continued evaluation of the Phase 1B infrastructure commissioning.

**September 2021 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 the Technical Committee 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 Board meeting.
  - Continue updates to Budget Workbook to include monthly tracking of actual costs for ARWA review.
  - Continue development of projected Operation and Maintenance costs and address feedback received from ARWA.
- Task 4 – Schedule
  - Revise the Project Deliverable Schedule based on the feedback received from ARWA and Design Consultants.
  - Coordinate with Program team to integrate each project schedule into overall Program schedule. Develop and distribute schedule update and memorandum.
- Task 6 – Data Management
  - Ongoing maintenance of Microsoft SharePoint Online program.
  - Continued updating of web-based GIS for easement acquisition process and alignment changes.
- Task 7 – Environmental Management



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

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- Review the Segment C Hazmat Phase II and Technical Documents report prepared by the Environmental Consultant.
- 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 hazmat studies for Segment C and E.
- 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, D, 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.
  
- Task 10 – Design Standards
  - Review Pipeline Construction Standards considering Contractor recommendations for cost savings.
  
- Task 11 – Engineering Design Management
  - Pipelines:
    - Segment A
      - Continue coordination with Design Consultant for final design and procurement development.
    - Segment B

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

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- Continue coordination with Design Consultant for final design and preparation for bidding.
  - Segment C
    - Begin review of the Segment C 100% design submittal prepared by the Design Consultant.
    - Continue coordination with Design Consultant for final design.
    - Continue coordination with Design Consultant regarding ongoing field work and pipeline alignment considerations as part of right-of-entry process and EFR development.
  - Segment D
    - Continue coordination with Design Consultant for final design and preparation for bidding.
  - Segment E
    - Begin review of the Segment E 100% design submittal prepared by the Design Consultant.
    - Continue coordination with Design Consultant for final design.
- Wellfield:
  - Continue coordination regarding the construction of Wells 6-9.
- Raw Water Infrastructure:
  - Continued coordination with Design Consultant for pre-construction phase services.
- Water Treatment Plant:
  - Continue coordination with Design Consultant concerning Hydraulics/Surge development.
  - Continued coordination with Design Consultant for pre-construction phase services.
- Booster Pump Station:
  - Coordination with Design Consultant for final design and procurement development.
- Inline Elevated Storage Tanks:
  - Begin review of the 60% design submittal prepared by the Design Consultant.
  - Coordination with Design Consultant for 60% 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.



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

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- 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.
  - General Coordination with GVEC and BBEC.
  - On-going Permit Tracking Log Updates.
  
- Task 15 – Procurement and Construction Phase Services
  - On-going coordination with Segment A and BPS Design Consultants during the procurement phase.
  - Coordination with Segment B to prepare for bidding.
  - On-going coordination with WTP and RWI Design Consultants during the construction phase.
  
- Task 16 – Other Services
  - Commissioning Planning
    - Finalize the evaluation of the Phase 1B infrastructure commissioning for ARWA’s review.
  - Solar Evaluation
    - Finalize update and present to the Technical Committee.
  - 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.

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**COMMITTEE MEMBER PACKETS**

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- F.2** Update, discussion and possible direction to Staff regarding the Solar System Analysis on the Authority's Water Treatment Plant Property. ~ *Nathan Cobler, P.E., Kimley-Horn & Associates*
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Background/Information

Kimley-Horn will follow-up on previous discussions with a presentation on the latest analysis of the possible addition of a solar array at the Water Treatment Plant property.

Attachment(s)

- Solar System Analysis Update – September 8, 2021

**Technical Committee Decision Needed:**

- Possible direction to Staff.



# Phase 1B Program Update

Solar System Analysis Update  
September 8, 2021



ALLIANCE WATER

Kimley»Horn  
Expect More. Experience Better.

PRESENTED BY

## Agenda

- ▶ Recap
- ▶ Results
- ▶ Next Steps

**Kimley»Horn**

January 9, 2020

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

**RE: ARWA1BPRG – Solar Field Production System Estimate**

Dear Mr. Moore,

Pursuant to your request for a Production System Generation Estimate associated with the Alliance Regional Water Authority Phase 1B Water Treatment Plant in referenced water system project in Caldwell County, Texas, kindly refer to the following pages. Should you have any questions, please let us know.

Sincerely,





Christopher Hanna  
Electrical Analyst

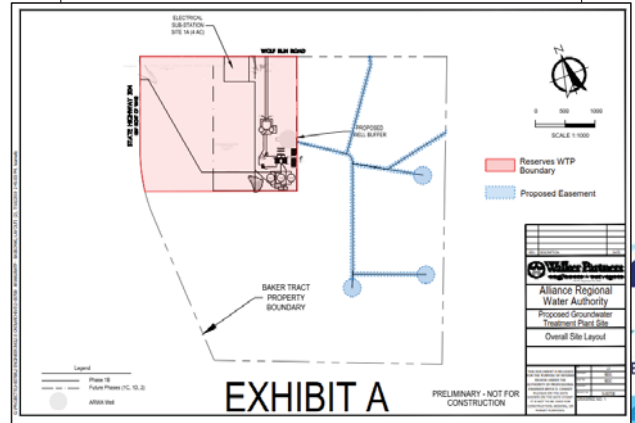
kimley-horn.com 902 Carnegie Center Boulevard, Suite 140, Princeton, NJ 08540



# Recap

- ▶ October 2019 Program Cost Workshop
  - Excess WTP property identified
    - Recommendations included:
      - Selling
      - Keeping as collateral
      - Solar Field Production

 		
<b>1 PHASE 1B PROGRAM COST EVALUATION FACT SHEET</b>		
ITEM UNDER CONSIDERATION:	SELLING EXCESS WATER TREATMENT PLANT PROPERTY	POTENTIAL LAND PRICE: <b>\$2,000,000</b>
<b>Summary</b>		
This option consists of selling a portion of the Water Treatment Plant Property. Alliance Regional Water Authority requires approximately 180 acres to construct the Water Treatment Plant, Wells and Raw Water Infrastructure, and leave sufficient space for the anticipated future expansion phases. This allows for the sale of the remaining 400 acres.		
<b>Pros</b>		<b>Cons</b>
Able to recoup funds that were spent on land that is not being utilized		Not having enough land for currently unforeseen uses of this property.
<b>Cost Evaluation</b>		
Initial Land Purchase of 500 Acres	Proportionate Value of 160 Acres	Potential Land Price - Excess 400 Acres to be Sold
\$2,600,000	\$600,000	<b>\$2,000,000</b>



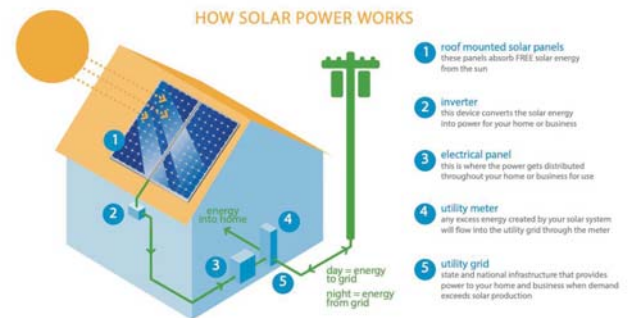
# Recap

- ▶ Site Plan
  - 400 acres available
  - ~80 acres modeled
  - Total Panels – 74,800 in a North-South tracker installation
  - Site Constraint Features
    - Existing energy utility easement
    - Pond
    - Topography
    - Raw Water Pipeline and Well Site easements



# Recap

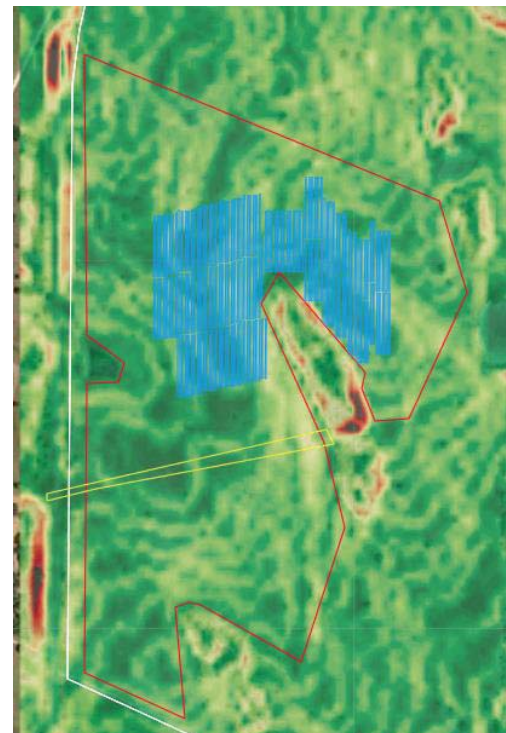
- ▶ Solar Field Production
  - Specific Yield - 1,811 – kilowatt hour (kWh) per kilowatt peak (kWp)
  - Site able to support 54 million kWh and supports 30 MWp
- ▶ Two Scenarios were considered
  - Scenario No. 1 - 4,000 hours of demand per year
  - Scenario No. 2 - Daily run time of 16 hours of demand per day
  - Both modeled with a ratio of max demand vs. total possible demand of 90% to account for downtime
    - Maintenance, repairs, outages, etc.



<https://sunwatts.com/how-solar-power-works/>

# Results

- ▶ Revised analysis based on year 2023 WTP power requirements
  - Monthly usage 890,000 kWh
  - Annual usage 10,680,000 kWh
  - Anticipate doubling power consumption in 2030
- ▶ Installation Cost: \$10 million
- ▶ Expected Payback within 9 years



Solar Array to support WTP

  
ALLIANCE WATER



# Next Steps

- ▶ Decide if Solar Production is something Alliance Water wants to continue analyzing
- ▶ Further investigation would identify key criteria:
  - Interconnection availability
  - Operating Costs
  - Ownership Models / Possible Partners



# Questions?



<https://www.nytimes.com/2018/10/09/business/energy-environment/the-magic-kingdom-is-going-green.html>



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

**COMMITTEE MEMBER PACKETS**

Wednesday, September 8th, 2021 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 968 4666 2936; Code: 344864

**F.3** Discussion and possible direction to Staff regarding Considerations for Operations of the Authority's Water System. ~ *Graham Moore, P.E., Executive Director*

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Background/Information

Following up on the presentation that was made to the Technical Committee and Board in August, attached is a presentation that focuses on the Pros/Cons of two attributes that are being analyzed for operations.

In October the final three attributes will be analyzed and brought to the committee for input.

Attachment(s)

- Considerations for Operations of the ARWA Water System – September 8, 2021.

**Technical Committee Decision Needed:**

- Possible direction to Staff.



# Considerations for Operations of the ARWA Water System

September 8, 2021

## Operational Scenarios to be Evaluated



In-House



Outsource



Hybrid / Transition



## Attributes to Consider

Product Quality

Financial Viability

Infrastructure Strategy & Performance

Customer Satisfaction

Operational Optimization

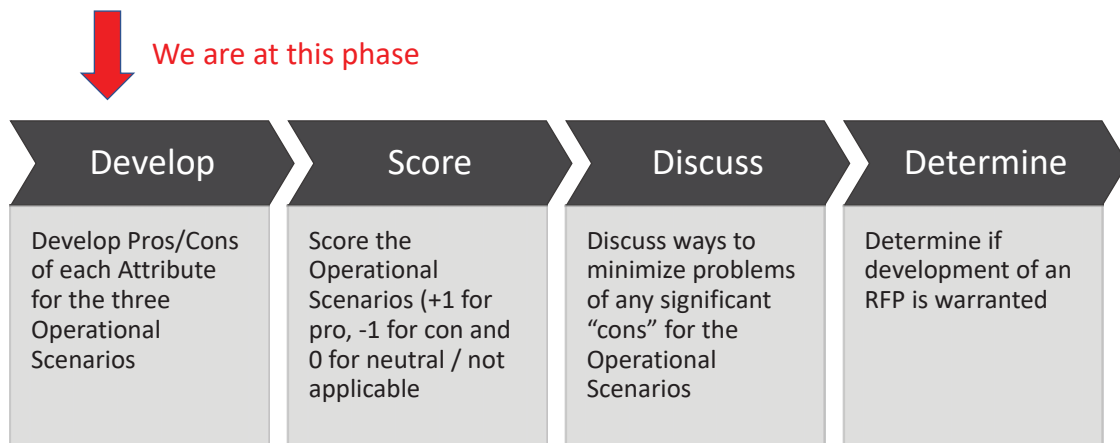
## Product Quality

	In-House	Hybrid	Outsource
Pros	Communicate more efficiently between AW and end users without no “middle-men”	Access to expertise early, less available after third-party operations cease.	Potential faster access to expertise.
			More staff available should an emergency condition arise that requires a short-term surge of employees.
Cons	Access to expertise. MITIGATION: Have master agreements in place to quickly access experts.	Assuming responsibility remains with third-party – still difficult to modify for changed conditions.	Difficulty in modifying operations contract to account for changed conditions / parameters.
			Less access by AW to all operational data. MITIGATION: Contract to ensure AW has “read-only” access to all data/records.

# Financial Viability

- Financial aspects are difficult to assess without getting bids to operate the system and comparing to internal projections.
- If outsourced operations are selected – then contract would need to provide directions on purchasing policies, capital repair & replacement monetary expectations, etc.
- Possible that outsourced operations could negotiate lower chemical prices due to scale of purchases.
- The hybrid model would be the most expensive option, at least for a couple of years while they overlap with the outsourced group.

# Process



## Next Steps / Schedule

- September & October – Pros/Cons Presentations
- October – Overall Scoring
- November – RFP Determination & “Con” Mitigation

If an RFP is deemed necessary, then the schedule for its preparation, solicitation and review will be produced. This will likely take a minimum of 6 months.

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

**COMMITTEE MEMBER PACKETS**

Wednesday, September 8th, 2021 at 3:00 P.M.

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**F.4** Discussion of legislative issues for the 87th Texas Legislature Special Session #2, and possible direction to Staff. ~ *Graham Moore, P.E., Executive Director*

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Background/Information

The second Special Session of the 87<sup>th</sup> Legislature ended on September 2nd. No items directly affecting water utilities, eminent domain or open meetings were on the Governor's call for the session.

A third special session is expected at some point to deal with re-districting after the decadal census.

**Technical Committee Decision Needed:**

- Possible direction to Staff.

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

**COMMITTEE MEMBER PACKETS**

Wednesday, September 8th, 2021 at 3:00 P.M.

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- F.5** 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 in September 14<sup>th</sup>.

Plum Creek Conservation District (PCCD)

The PCCD is scheduled to meet on September 21<sup>st</sup>. Staff submitted a request to modify the Authority's permit to delay the construction of one of the wells in the PCCD area. The permit specially allows for such a request. The request is expected to be discussed at the September 21<sup>st</sup> meeting.

Groundwater Management Area 13

No update.

Region L Planning Group

Region L is expected to meet in a special meeting on September 21<sup>st</sup>. It is believed that the purpose is to discuss the technical consultant for the next regional plan.

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

No update.

**Technical Committee decision needed:**

- None.

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

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Wednesday, September 8th, 2021 at 3:00 P.M.

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- 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*

Consultant Invoices Paid

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

**FY 20-21 CONSULTANT INVOICES PAID IN AUGUST 2021**

<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>
LAN - Kyle/Buda Design	\$76,971.62	\$0.00	\$12,009.70	16%	\$64,961.92	
RW Harden	\$30,000.00	\$5,296.75	\$12,242.31	41%	\$17,757.69	
Tx Solutions Group	\$72,000.00	\$6,000.00	\$66,000.00	92%	\$6,000.00	
BGE - Ph 1A CA	\$7,110.08	\$0.00	\$1,400.30	20%	\$5,709.78	
Kent Alan Sick - ROW Legal	\$45,000.00	\$0.00	\$7,916.40	18%	\$37,083.60	
LNV - GIS Svcs	\$16,693.63	\$0.00	\$14,630.25	88%	\$2,063.38	
Armstrong, Vaughan & Associates, P.C.	\$10,930.00	\$0.00	\$10,930.00	100%	\$0.00	
J.R. Tolles & Associates, Inc.	\$245,000.00	\$21,547.00	\$190,222.00	78%	\$54,778.00	
Lloyd Gosselink Rochelle & Townsend	\$105,000.00	\$6,936.00	\$74,767.89	71%	\$30,232.11	
CD&P - Public Relations	\$45,404.50	\$5,597.75	\$34,108.03	75%	\$11,296.47	
MLA Labs, Inc. - Segment B	\$6,773.00	\$0.00	\$398.00	6%	\$6,375.00	
HDR - 2021 Rate Study	\$16,125.00	\$0.00	\$0.00	0%	\$16,125.00	
Law Offices of Patricia Erlinger Carls	\$25,000.00	\$0.00	\$1,102.50	4%	\$23,897.50	
<b>Total</b>	<b>\$702,007.83</b>	<b>\$45,377.50</b>	<b>\$425,727.38</b>		<b>\$276,280.45</b>	

**REGULAR MEETING**  
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**COMMITTEE MEMBER PACKETS**

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

<b>PHASE 1B FY 20-21 CONSULTANT INVOICES PAID IN AUGUST 2021</b>						
<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>
Kimley-Horn Ph 1B Owner's Rep w/O4	\$1,319,033.52	\$0.00	\$1,319,033.52	100%	\$0.00	
Kimley-Horn Ph 1B Owner's Rep w/O5	\$2,685,433.00	\$0.00	\$373,744.64	14%	\$2,311,688.36	
Blanton - Environmental	\$875,510.28	\$0.00	\$535,577.62	61%	\$339,932.66	
LAN - Segment A Prelim	\$116,364.20	\$0.00	\$2,266.60	2%	\$114,097.60	
LAN - Segment A Final	\$447,554.89	\$0.00	\$299,192.61	67%	\$148,362.28	
KFA - Segment B Prelim	\$13,275.94	\$0.00	\$0.00	0%	\$13,275.94	
KFA - Segment B Final	\$775,215.97	\$0.00	\$545,780.77	70%	\$229,435.20	
BGE - Segment C Prelim	\$15,099.24	\$0.00	\$0.00	0%	\$15,099.24	
BGE - Segment C	\$2,497,617.09	\$0.00	\$1,990,687.22	80%	\$506,929.87	
FNI - Segment D Prelim	\$63,533.66	\$0.00	\$0.00	0%	\$63,533.66	
FNI - Segment D Final	\$993,177.03	\$0.00	\$770,376.03	78%	\$222,801.00	
Walker - Segment E Prelim	\$58,638.01	\$7,135.02	\$20,484.77	35%	\$38,153.24	
Walker - Segment E Final	\$1,094,367.61	\$0.00	\$697,422.00	64%	\$396,945.61	
LAN - ROW	\$1,601,100.28	\$0.00	\$569,233.85	36%	\$1,031,866.43	
DTR&G	\$1,272,719.30	\$139,103.52	\$649,485.88	51%	\$623,233.42	
CBRE - Appraisals	\$1,784,150.00	\$70,440.00	\$566,700.00	32%	\$1,217,450.00	
CP&Y - Survey	\$984,980.00	\$0.00	\$529,385.00	54%	\$455,595.00	
Rw Harden - WDH Const Admin	\$358,153.60	\$0.00	\$281,692.00	79%	\$76,461.60	
LNW - Rwl	\$273,573.86	\$0.00	\$129,588.86	47%	\$143,985.00	
Walker Partners - WTP Final Design	\$1,029,963.16	\$0.00	\$929,710.28	90%	\$100,252.88	
FNI - BPS Prelim	\$4,772.50	\$0.00	\$4,772.50	100%	\$0.00	
FNI - BPS Final	\$838,134.63	\$3,034.33	\$546,736.19	65%	\$291,398.44	
Plummer - Inline Elevated Tank Prelim	\$42,799.42	\$0.00	\$39,069.35	91%	\$3,730.07	
Plummer - Inline Elevated Tank Final	\$423,526.00	\$0.00	\$14,421.00	3%	\$409,105.00	
Pape-Dawson - CM&l w/O#1	\$16,880.44	\$0.00	\$16,380.03	97%	\$500.41	
Pape-Dawson - CM&l w/O#2	\$147,500.00	\$0.00	\$130,335.00	88%	\$17,165.00	
Pape-Dawson - CM&l w/O#3	\$74,460.00	\$0.00	\$71,360.00	96%	\$3,100.00	
Pape-Dawson - CM&l w/O#4	\$100,600.00	\$36,527.50	\$81,352.50	81%	\$19,247.50	
Pape-Dawson - CM&l w/O#5	\$2,034,310.00	\$0.00	\$0.00	0%	\$2,034,310.00	
Hicks & Co - WDH Environmental	\$15,874.00	\$0.00	\$303.00	2%	\$15,571.00	
<b>Total</b>	<b>\$21,958,317.63</b>	<b>\$256,240.37</b>	<b>\$11,115,091.22</b>		<b>\$10,843,226.41</b>	

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

**COMMITTEE MEMBER PACKETS**

Wednesday, September 8th, 2021 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 968 4666 2936; Code: 344864

Approved Change Orders

<b>CHANGE ORDERS APPROVED IN AUGUST 2021</b>				
<b>Consultant</b>	<b>Original Authorization</b>	<b>Change Orders to Date</b>	<b>Change Order Approved this Month</b>	<b>New Total Contract Amount</b>
Walker Partners: 1B Segment E	\$ 408,755.00	\$ 164,719.00	\$ -	\$ 573,474.00
Drilling & Hydrogeology	\$ 114,000.00	\$ 31,380.00	\$ -	\$ 145,380.00
Freese & Nichols: 1B BPS & DP Prelim	\$ 771,617.00	\$ 44,408.00	\$ -	\$ 816,025.00
K Friese & Assoc.: 1B Segment B	\$ 565,417.00	\$ 60,095.00	\$ -	\$ 625,512.00
BGE: 1B Segment C Prelim	\$ 614,626.00	\$ 34,430.00	\$ -	\$ 649,056.00
Freese & Nichols: 1B Segment D	\$ 597,714.00	\$ 66,722.00	\$ -	\$ 664,436.00
Walker Partners: 1B WTP (Prelim)	\$ 1,203,606.00	\$ 40,406.00	\$ -	\$ 1,244,012.00
CP&Y: Ph 1B Program Survey	\$ 3,375,780.00	\$ 83,500.00	\$ -	\$ 3,459,280.00
Freese & Nichols: 1B Segment D (Final)	\$ 1,999,464.00	\$ 173,739.09	\$ 37,277.00	\$ 2,158,203.09
LAN: 1B Segment A Final Design	\$ 1,903,077.00	\$ 226,591.00	\$ 30,000.00	\$ 2,089,668.00
Blanton & Assoc: Environmental Invest.	\$ 1,398,775.00	\$ 150,703.00	\$ -	\$ 1,549,478.00
K Friese & Assoc: 1B Seg B Final Design	\$ 1,830,994.00	\$ 306,242.13	\$ 9,961.00	\$ 2,063,949.13
Walker Partners: 1B WTP (Final)	\$ 2,900,402.00	\$ 564,435.00	\$ -	\$ 3,464,837.00
LNV: 1B Raw Water (Design)	\$ 1,418,700.00	\$ 85,337.00	\$ 10,000.00	\$ 1,504,037.00
Walker Partners: 1B Seg E (Final)	\$ 1,190,421.00	\$ 98,128.00	\$ 10,000.00	\$ 1,288,549.00
BGE: 1B Segment C Final	\$ 2,688,310.00	\$ 255,021.00	\$ -	\$ 2,943,331.00
Freese & Nichols: 1B BPS & DP Final	\$ 1,580,519.00	\$ 126,073.00	\$ 11,249.00	\$ 1,706,592.00
Pape Dawson: 1B BPS & DP Prelim	\$ 57,520.00	\$ 43,080.00	\$ -	\$ 100,600.00
CD&P: 2020 Public Relations	\$ 50,000.00	\$ 10,000.00	\$ -	\$ 60,000.00



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

**COMMITTEE MEMBER PACKETS**

Wednesday, September 8th, 2021 at 3:00 P.M.

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- 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, September 8th, 2021 at 3:00 P.M.

Conference Call Number: 1-346-248-7799; Meeting ID: 968 4666 2936; Code: 344864

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*
  - D. *Phase 1B Segment A competitive sealed proposals*
-

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

**COMMITTEE MEMBER PACKETS**

Wednesday, September 8th, 2021 at 3:00 P.M.

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**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*
  - D. *Possible direction to Staff regarding the Phase 1B Segment A competitive sealed proposals*
-

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

**COMMITTEE MEMBER PACKETS**

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**J. ADJOURNMENT**

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