



**U.S. ARMY CORPS OF ENGINEERS  
REGULATORY PROGRAM  
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)  
NAVIGABLE WATERS PROTECTION RULE**

**I. ADMINISTRATIVE INFORMATION**

Completion Date of Approved Jurisdictional Determination (AJD): 2/9/2021

ORM Number: SWF-2020-00452

Associated JDs: N/A

Review Area Location<sup>1</sup>: State/Territory: Texas City: Brownwood County/Parish/Borough: Brown

Center Coordinates of Review Area: Latitude 31.671152 Longitude -99.014402

**II. FINDINGS**

**A. Summary:** Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A
- There are “navigable waters of the United States” within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- There are “waters of the United States” within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

**B. Rivers and Harbors Act of 1899 Section 10 (§ 10)<sup>2</sup>**

§ 10 Name	§ 10 Size	§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A.	N/A.

**C. Clean Water Act Section 404**

Territorial Seas and Traditional Navigable Waters ((a)(1) waters): <sup>3</sup>			
(a)(1) Name	(a)(1) Size	(a)(1) Criteria	Rationale for (a)(1) Determination
N/A.	N/A.	N/A.	N/A.

Tributaries ((a)(2) waters):			
(a)(2) Name	(a)(2) Size	(a)(2) Criteria	Rationale for (a)(2) Determination
N/A.	N/A.	N/A.	N/A.

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):			
(a)(3) Name	(a)(3) Size	(a)(3) Criteria	Rationale for (a)(3) Determination
N/A.	N/A.	N/A.	N/A.

Adjacent wetlands ((a)(4) waters):			
(a)(4) Name	(a)(4) Size	(a)(4) Criteria	Rationale for (a)(4) Determination
N/A.	N/A.	N/A.	N/A.

<sup>1</sup> Map(s)/figure(s) are attached to the AJD provided to the requestor.

<sup>2</sup> If the navigable water is not subject to the ebb and flow of the tide or included on the District’s list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.

<sup>3</sup> A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.



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**D. Excluded Waters or Features**

Excluded waters ((b)(1) – (b)(12)): <sup>4</sup>				
Exclusion Name	Exclusion Size		Exclusion <sup>5</sup>	Rationale for Exclusion Determination
SWF-2020-00452-1 (EMB/EMC)	1499	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	Project information provided by the consultant, USACE site visit, and supporting data indicate that the water feature is an ephemeral stream that connects hydrologically to an unnamed stream to a reservoir on Willis Creek. The stream flows only in direct response to precipitation events and does not support sustained flows for any duration after precipitation events have ended. The drainage area is approximately 115 acres. See sections IIIB and IIIC for typical year assessment and additional details to support our determination. Thus, the Corps has determined that the stream meets the criteria of a (b)(3) excluded water feature.
SWF-2020-00452-2 (ERA)	955	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	Project information provided by the consultant, USACE site visit, and supporting data indicate that the water feature is an ephemeral stream that connects hydrologically to an unnamed stream to a reservoir on Willis Creek. The stream flows only in direct response to precipitation events and does not support sustained flows for any duration after precipitation events have ended. The drainage area is approximately 65 acres. See sections IIIB and IIIC for typical year assessment and additional details to support our determination. Thus, the Corps has determined that the stream meets the criteria of a (b)(3) excluded water feature.
SWF-2020-00452-3 (EMA)	2292	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	Project information provided by the consultant, USACE site visit, and supporting data indicate that the water feature is an ephemeral stream that connects hydrologically to an unnamed stream to a reservoir on Willis Creek. The stream flows only in direct response to precipitation events and does not support sustained flows for any duration after precipitation events have ended. The drainage area is approximately 125 acres. See sections IIIB and IIIC for typical year assessment and additional details to support our determination.

<sup>4</sup> Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.

<sup>5</sup> Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.



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Excluded waters ((b)(1) – (b)(12)): <sup>4</sup>			
Exclusion Name	Exclusion Size	Exclusion <sup>5</sup>	Rationale for Exclusion Determination
			Thus, the Corps has determined that the stream meets the criteria of a (b)(3) excluded water feature.
SWF-2020-00452-4 (ERB)	1206	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool. Project information provided by the consultant, USACE site visit, and supporting data indicate that the water feature is an ephemeral stream that connects hydrologically to a reservoir on Willis Creek. The stream flows only in direct response to precipitation events and does not support sustained flows for any duration after precipitation events have ended. The drainage area is approximately 210 acres. See sections IIIB and IIIC for typical year assessment and additional details to support our determination. Thus, the Corps has determined that the stream meets the criteria of a (b)(3) excluded water feature.

**III. SUPPORTING INFORMATION**

**A. Select/enter all resources** that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

Information submitted by, or on behalf of, the applicant/consultant: [AJD Request and Stream Delineation Report, 2020-10-16, submitted by Hodges, Harbin, Newberry, & Tribble, Inc., consulting engineers.](#)

This information is sufficient for purposes of this AJD.

Rationale: [N/A](#)

Data sheets prepared by the Corps: [Title\(s\) and/or date\(s\).](#)

Photographs: [Aerial and Other: Imagery from Google Earth, HistoricAerials.com, and Digital Globe – all available years; photographs provided by the consultant, 2020-09-17 \(enclosed\).](#)

Corps site visit(s) conducted on: [2020-12-03](#)

Previous Jurisdictional Determinations (AJDs or PJDs): [ORM Number\(s\) and date\(s\).](#)

Antecedent Precipitation Tool: [provide detailed discussion in Section III.B.](#)

USDA NRCS Soil Survey: [Title\(s\) and/or date\(s\).](#)

USFWS NWI maps: [ESRI managed imagery, SWF Regulatory Viewer, 2021-02-09](#)

USGS topographic maps: [Bangs East and Brownwood, TX - 1:24,000](#)

**Other data sources used to aid in this determination:**

Data Source (select)	Name and/or date and other relevant information
<a href="#">USGS Sources</a>	<a href="#">National Hydrography Dataset, SWF Regulatory Viewer, 2020-12-02</a>
<a href="#">USDA Sources</a>	<a href="#">N/A.</a>
<a href="#">NOAA Sources</a>	<a href="#">Record of Climatological Observations: 08/2020, 09/2020, 11/2020, 12/2020</a>
<a href="#">USACE Sources</a>	<a href="#">N/A.</a>
<a href="#">State/Local/Tribal Sources</a>	<a href="#">N/A.</a>
<a href="#">Other Sources</a>	<a href="#">Location and topographic maps provided by the consultant</a>



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**B. Typical year assessment(s):** Typical year assessment was made by using APT for the date of the Corps' site visit, 2020-12-03, conditions were drier than normal during the wet season. A combined 0.45 inches of precipitation was recorded at Brownwood 2.7 SSE, approximately 3.9 miles from the project site, 4 and 5 days prior to the site visit. Flow of water was not observed. Pooling of water was not observed.

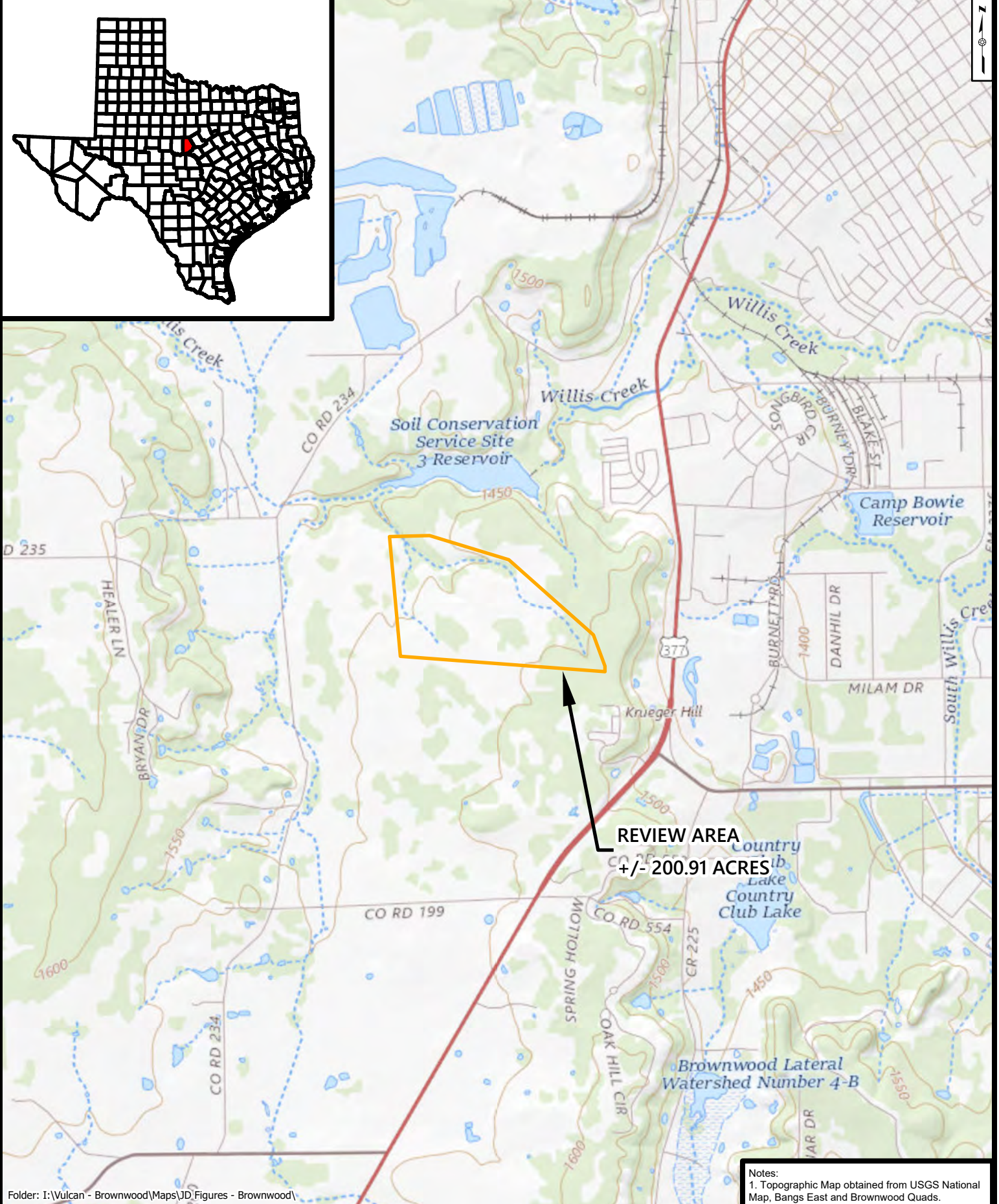
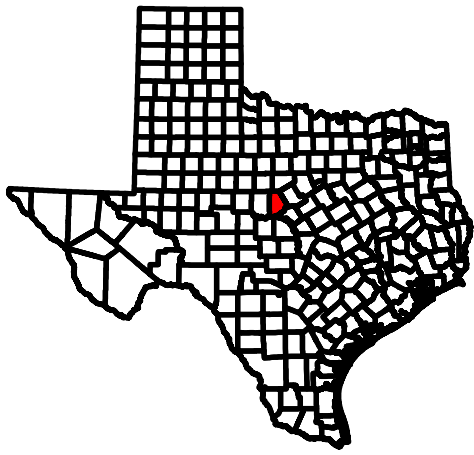
Typical year assessment was made by using APT for the date of the consultant's site visit, 2020-09-17, conditions were normal during the dry season. A combined 3.06 inches of precipitation was recorded at Brownwood 2.7 SSE, 6 and 7 days prior to the site visit. The consultant states that baseflow was not observed. The consultant's photographs exhibit pooling (photos 2 and 3) as well as streambed photos that do not exhibit water flowing or pooling. Note: The rainfall total for a 30-day period prior to the consultant's site visit was 6.38 inches.

Aerial imagery was evaluated by using available sources and years (e.g., Google Earth, HistoricAerials.com, and Digital Globe); however, water was not observed in any of the images evaluated. Note: Portions of each subject stream channel was not visible because of vegetative cover. It is the Corps' determination through an assessment of all available information that flow within these streams do not occur more than in direct response to precipitation in a typical year and are at present classified as having ephemeral flow.

**C. Additional comments to support AJD:** The assessed ephemeral streams begin on-site and flow northwest off-site eventually into Soil Conservation Service Site 3 Reservoir, an impoundment on Willis Creek, north of the project boundary. Wetlands were not observed on-site. Substrate of each of stream channel consisted of sediment to cobble limestone. Pool depth in each of the streams assessed was no more than 18 inches with a bedrock bottom.

Enclosures: Project Area Map, Stream Resource ID Map, Photo Log, APT (2020-09-17, 2020-12-03)



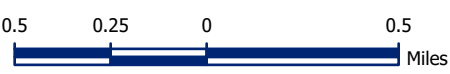


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Notes:  
 1. Topographic Map obtained from USGS National Map, Bangs East and Brownwood Quads.

Figure 1 - Location Map

**Brownwood Quarry**  
**Vulcan Materials Company**  
**Brownwood, Texas**  
 Date: 9/22/2020







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Notes:  
 1. Imagery obtained from ESRI and dated May 2018.  
 2. Aquatic resource delineation performed by HHNT Scientists September 17, 2020.

Figure 7 - Resource ID Map

DEPICTED WATERS OF THE U.S. DELINEATION REMAINS AN OPINION OF HHNT UNTIL IT IS FORMALLY VERIFIED IN WRITING BY THE U.S. ARMY CORPS OF ENGINEERS VIA A FORMAL DETERMINATION LETTER.

Brownwood Quarry  
 Vulcan Materials Company  
 Brownwood, Texas

Legend

- Photo Point
- ▭ Project Area (+/- 200.91 ac.)
- Stream Form
- Ephemeral Channels (b)(3) (+/- 5,952 lin. ft)



DELINEATED WETLANDS AND STREAMS HAVE NOT BEEN APPROVED BY ACOE.

Date: 10/5/2020







PHOTO 1: Area Marked as an NWI Stream But Did Not Have Bed/Bank Features



PHOTO 2: Ephemeral Channel at Flag at RA4



PHOTO 3: Ephemeral Stream Channel RA



PHOTO 4: Ephemeral Channel at Flag RB4

Project No: 8021-010

Date: September 17, 2020

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**Site Photographs**  
Vulcan Materials- Brownwood Quarry  
**Brownwood, TX**







PHOTO 5: Ephemeral Channel RB



PHOTO 6: Ephemeral Channel at Flag EMC4



PHOTO 7: Ephemeral Channel at Flag at EMC4



PHOTO 8: Ephemeral Channel EMA at Stream Flag EMA9

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**Site Photographs**  
**Vulcan Materials- Brownwood Quarry**  
**Brownwood, TX**







PHOTO 9: Ephemeral Channel EMA at Stream Flag EMA4



PHOTO 10: No Channel, Facing Southeast



PHOTO 11: No Channel, Facing North



PHOTO 12: Ephemeral Channel EMB/EMC at Stream Flag EMB7

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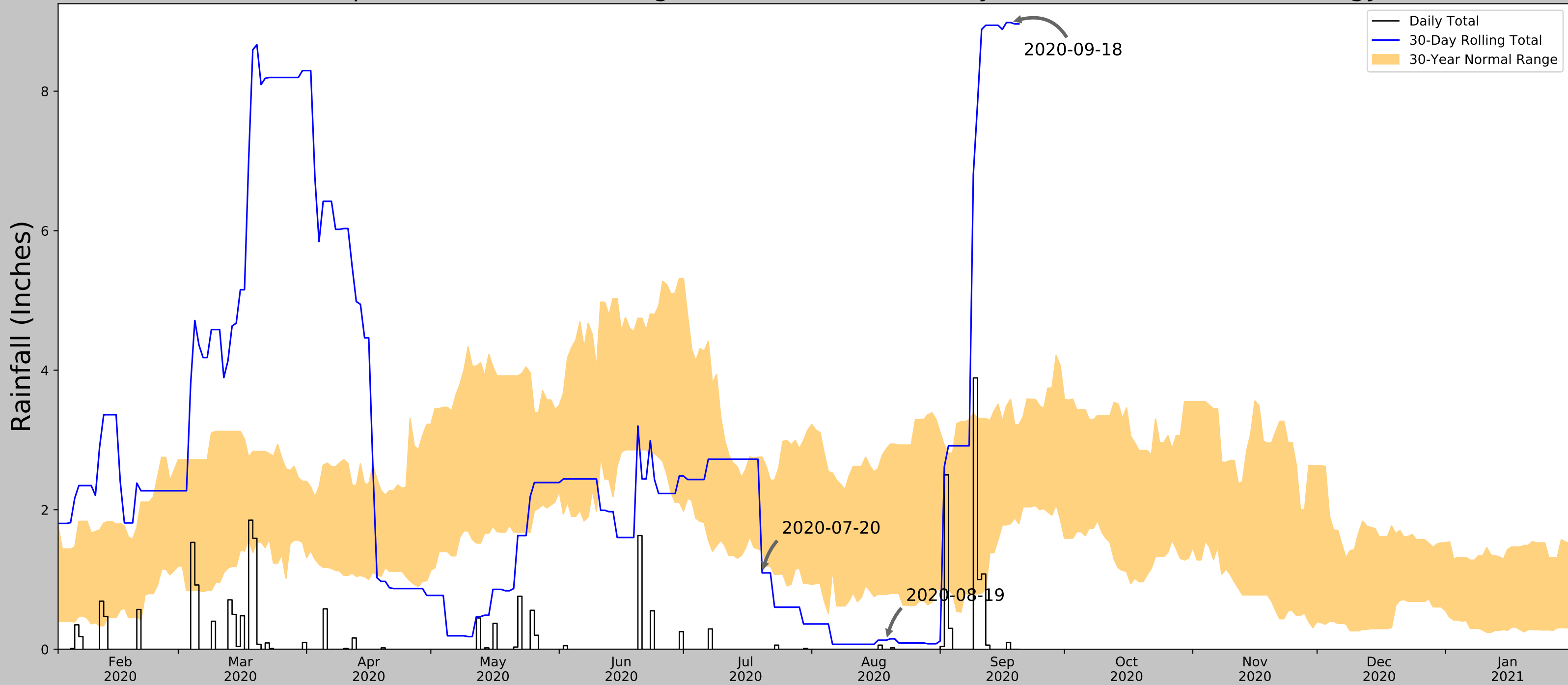
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**Site Photographs**  
**Vulcan Materials- Brownwood Quarry**  
**Brownwood, TX**





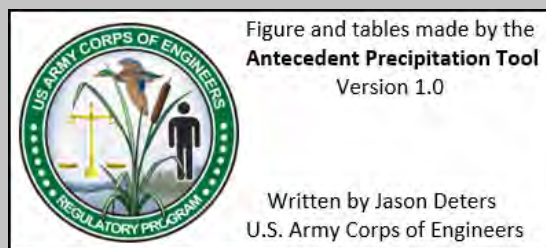
# Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	32.618876, -99.016219
Observation Date	2020-09-18
Elevation (ft)	1268.15
Drought Index (PDSI)	Mild wetness (2020-08)
WebWIMP H <sub>2</sub> O Balance	Dry Season

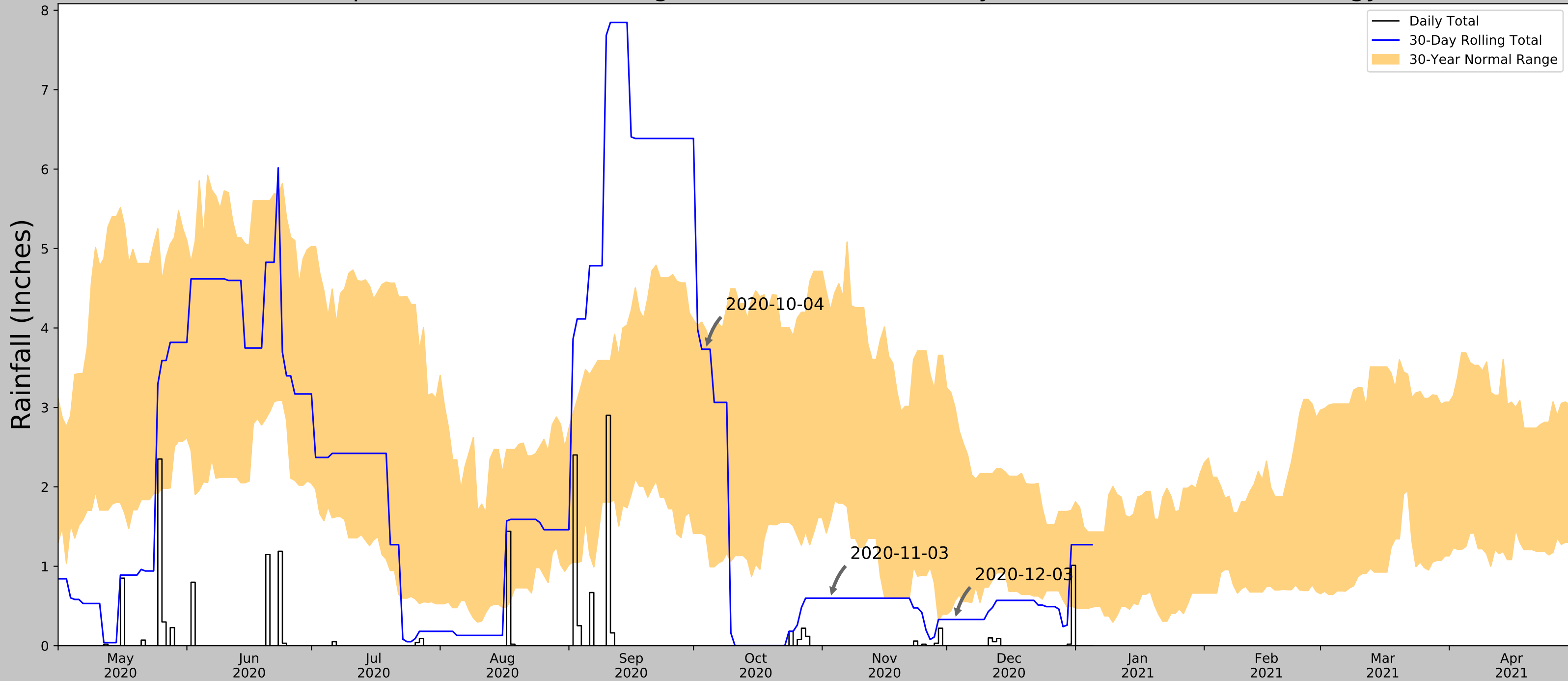
30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-18	1.8	3.583071	8.984252	Wet	3	3	9
2020-08-19	0.787795	2.874016	0.129921	Dry	1	2	2
2020-07-20	1.416142	2.754331	1.094488	Dry	1	1	1
Result							Normal Conditions - 12

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ALBANY	32.7047, -99.3011	1448.163	17.6	180.013	11.088	10797	89
MORAN 7.3 N	32.6518, -99.1588	1312.992	8.602	44.842	4.257	15	1
ALBANY 6.8 SE	32.6598, -99.2103	1289.042	11.641	20.892	5.482	152	0
BRECKENRIDGE	32.75, -98.9017	1169.948	11.244	98.202	6.164	352	0
CISCO 10.5 NW	32.4836, -99.1161	1459.974	11.009	191.824	7.066	1	0
FT GRIFFIN	32.9264, -99.2342	1274.934	24.735	6.784	11.299	35	0





# Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	31.673512, -99.018224
Observation Date	2020-12-03
Elevation (ft)	1461.56
Drought Index (PDSI)	Mild wetness (2020-11)
WebWIMP H <sub>2</sub> O Balance	Wet Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-12-03	0.569291	2.996063	0.330709	Dry	1	3	3
2020-11-03	1.596457	4.227559	0.598425	Dry	1	2	2
2020-10-04	1.387008	3.974803	3.732284	Normal	2	1	2
Result							Drier than Normal - 7

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
BROWNWOOD 2ENE	31.7383, -98.9456	1394.029	6.186	67.531	3.201	10533	81
BROWNWOOD 1.2 S	31.703, -98.9769	1353.018	3.171	108.542	1.771	1	0
BROWNWOOD 2.7 SSE	31.6861, -98.9524	1395.013	3.967	66.547	2.049	322	9
BROWNWOOD 6.7 ENE	31.7555, -98.8697	1467.848	10.407	6.288	4.748	51	0
SANTA ANNA 12SSE	31.5906, -99.2258	1417.979	13.488	43.581	6.658	5	0
MULLIN	31.5833, -98.6667	1492.126	21.599	30.566	10.38	353	0
BURKETT	31.9917, -99.2203	1568.898	24.981	107.338	13.923	88	0

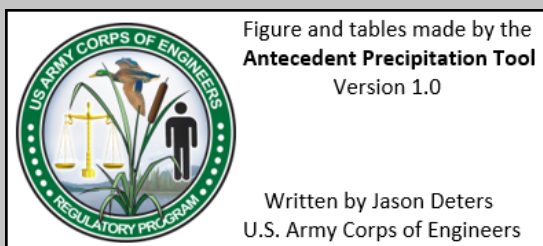


Figure and tables made by the  
**Antecedent Precipitation Tool**  
Version 1.0

Written by Jason Deters  
U.S. Army Corps of Engineers