

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 2/4/2021

ORM Number: SWG-2019-00857

Associated JDs: N/A

Review Area Location¹: State/Territory: Texas City: Houston County/Parish/Borough: Harris

Center Coordinates of Review Area: Latitude 30.019721 Longitude -95.492369

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 or describe rationale.
 - ☐ 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)²

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

C. Clean Water Act Section 404

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

Tributaries ((a	Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Siz	ze	(a)(2) Criteria	Rationale for (a)(2) Determination	
Stream 2, Spring Gully, Panel A	3110	linear feet	(a)(2) Perennial tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year.	Spring Gully is a naturally occurring surface water channel that contributes surface water flow to an (a) (1) water in a typical year, is perennial, and flows as such in a typical year. Based on visual observation and historic aerial imagery review of this tributary, this feature exhibits perennial water flow.	
Stream 1, Cypress	1064	linear feet	(a)(2) Perennial tributary contributes	Cypress Creek is a naturally occurring surface water channel that contributes surface water flow to an (a) (1) water in a typical year, is perennial, and flows as	

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

² 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.

³ 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.



Tributaries ((a	Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Size		(a)(2) Criteria	Rationale for (a)(2) Determination	
Creek, Panel A			surface water flow directly or indirectly to an (a)(1) water in a typical year.	such in a typical year. Based on visual observation and historic aerial imagery review of this tributary, this feature exhibits perennial water flow.	
Stream 1, Cypress Creek, Panel B	5594	linear feet	(a)(2) Perennial tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year.	Cypress Creek is a naturally occurring surface water channel that contributes surface water flow to an (a) (1) water in a typical year, is perennial, and flows as such in a typical year. Based on visual observation and historic aerial imagery review of this tributary, this feature exhibits perennial water flow.	

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.	N/A.	

Adjacent wetla	ands ((a)(4) waters):		
(a)(4) Name	(a)(4) Siz	ze	(a)(4) Criteria	Rationale for (a)(4) Determination
Wetland 7 Panel A	0.04	acre(s)	(a)(4) Wetland inundated by flooding from an (a)(1)-(a)(3) water in a typical year.	This is a wetland that does not abut a a)1-a)3 water but it is located in a landscape position that would be anticipated to be flooded in a typical year by Cypress Creek. This was determined based on a review of USGS topo maps, aerial photograph, and sitespecific information including elevation and FEMA flood profiles.
Wetland 6 Panel A	0.13	acre(s)	(a)(4) Wetland inundated by flooding from an (a)(1)-(a)(3) water in a typical year.	This is a wetland that does not abut a a)1-a)3 water but it is located in a landscape position that would be anticipated to be flooded in a typical year by Cypress Creek. This was determined based on a review of USGS topo maps, aerial photograph, and sitespecific information including elevation and FEMA flood profiles.
Wetland 4 Panel A	0.04	acre(s)	(a)(4) Wetland inundated by flooding from an (a)(1)-(a)(3) water in a typical year.	This is a wetland that does not abut a a)1-a)3 water but it is located in a landscape position that would be anticipated to be flooded in a typical year by Spring Gully. This was determined based on a review of USGS topo maps, aerial photograph, and sitespecific information including elevation and FEMA flood profiles
Wetland 3 Panel A	0.25	acre(s)	(a)(4) Wetland inundated by flooding from an (a)(1)-(a)(3) water in a typical year.	This is a wetland that does not abut a a)1-a)3 water but it is located in a landscape position that would be anticipated to be flooded in a typical year by Cypress Creek. This was determined based on a review of USGS topo maps, aerial photograph, and site-



Adjacent wetla (a)(4) Name	(a)(4) S		(a)(4) Criteria	Rationale for (a)(4) Determination
(4)(1) 1141116			(a)(1) Omona	specific information including elevation and FEMA flood profiles.
Beaver Pond Panel A	0.65	acre(s)	(a) (4) Wetland inundated by flooding from an (a) (1) - (a) (3) water in a typical year.	This is a wetland does not abut a a)1-a)3 water but it is located in a landscape position that would be anticipated to be flooded in a typical year by Cypress Creek. This was determined based on a review of USGS topo maps, aerial photograph, and sitespecific information including elevation and FEMA flood profiles.
Wetland 11 Panel A	0.09	acre(s)	(a)(4) Wetland inundated by flooding from an (a)(1)-(a)(3) water in a typical year.	This is a wetland does not abut a a)1-a)3 water but it is located in a landscape position that would be anticipated to be flooded in a typical year by Cypress Creek. This was determined based on a review of USGS topo maps, aerial photograph, and sitespecific information including elevation and FEMA flood profiles
Wetland 12 Panel A	0.05	acre(s)	(a)(4) Wetland inundated by flooding from an (a)(1)-(a)(3) water in a typical year.	This is a wetland does not abut a a)1-a)3 water but it is located in a landscape position that would be anticipated to be flooded in a typical year by Cypress Creek. This was determined based on a review of USGS topo maps, aerial photograph, and sitespecific information including elevation and FEMA flood profiles
Wetland 8 Panel B	0.09	acre(s)	(a)(4) Wetland inundated by flooding from an (a)(1)-(a)(3) water in a typical year.	This is a wetland does not abut a a)1-a)3 water but it is located in a landscape position that would be anticipated to be flooded in a typical year by Cypress Creek. This was determined based on a review of USGS topo maps, aerial photograph, and sitespecific information including elevation and FEMA flood profiles
Wetland 2 Panel B	0.30	acre(s)	(a)(4) Wetland inundated by flooding from an (a)(1)-(a)(3) water in a typical year.	This is a wetland does not abut a a)1-a)3 water but it is located in a landscape position that would be anticipated to be flooded in a typical year by Cypress Creek. This was determined based on a review of USGS topo maps, aerial photograph, and sitespecific information including elevation and FEMA flood profiles.
Wetland 9 Panel B	1.02	acre(s)	(a)(4) Wetland inundated by flooding from an (a)(1)-(a)(3) water in a typical year.	This is a wetland does not abut a a)1-a)3 water but it is located in a landscape position that would be anticipated to be flooded in a typical year by Cypress Creek. This was determined based on a review of USGS topo maps, aerial photograph, and sitespecific information including elevation and FEMA flood profiles.
Wetland 1 Panel B	0.008	acre(s)	(a)(4) Wetland inundated by flooding from an (a)(1)-(a)(3)	This is a wetland does not abut a a)1-a)3 water but it is located in a landscape position that would be anticipated to be flooded in a typical year by Cypress Creek. This was determined based on a review of



Adjacent wetla	Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Siz		(a)(4) Criteria	Rationale for (a)(4) Determination	
			water in a typical year.	USGS topo maps, aerial photograph, and site- specific information including elevation and FEMA flood profiles.	
Wetland 10 Panel B	0.04	acre(s)	(a)(4) Wetland inundated by flooding from an (a)(1)-(a)(3) water in a typical year.	This is a wetland does not abut a a)1-a)3 water but it is located in a landscape position that would be anticipated to be flooded in a typical year by Cypress Creek. This was determined based on a review of USGS topo maps, aerial photograph, and sitespecific information including elevation and FEMA flood profiles.	
Wetland 15 Panel B	0.03	acre(s)	(a)(4) Wetland inundated by flooding from an (a)(1)-(a)(3) water in a typical year.	This is a wetland does not abut a a)1-a)3 water but it is located in a landscape position that would be anticipated to be flooded in a typical year by Cypress Creek. This was determined based on a review of USGS topo maps, aerial photograph, and sitespecific information including elevation and FEMA flood profiles.	

D. Excluded Waters or Features

Excluded waters ((b)(1) - (b))(12)):4		
Exclusion Name	Exclusion	Size	Exclusion ⁵	Rationale for Exclusion Determination
Culvert Panel A	200	linear feet	(b)(1) Water or water feature that is not identified in (a)(1)-(a)(4) and does not meet the other (b)(1) subcategories.	(b)(1) Waters or water features that are not identified in paragraph (a)(1), (a)(2), (a)(3), or (a)(4) includes underground or buried portions of a channel network (including culverts).
Culvert Panel B	600	linear feet	(b)(1) Water or water feature that is not identified in (a)(1)-(a)(4) and does not meet the other (b)(1) subcategories.	(b)(1) Waters or water features that are not identified in paragraph (a)(1), (a)(2), (a)(3), or (a)(4) includes underground or buried portions of a channel network (including culverts).
Stream 6 Panel A	119	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	This feature is a shallow ephemeral swale that is only subject to water flow in direct response to precipitation. This feature does not meet the definition of an (a)(1) or (a)(2) water and is not located within an (a)(4) water. This feature does not relocate a tributary nor is it within a tributary
Stream 4 Panel A	293	linear feet	(b)(3) Ephemeral feature, including	This feature is a shallow ephemeral swale that is only subject to water flow in direct response to

⁴ 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.

⁵ 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.



Excluded waters	((b)(1) – (b)(12)):4		
Exclusion Name	Exclusion		Exclusion ⁵	Rationale for Exclusion Determination
			an ephemeral stream, swale, gully, rill, or pool.	precipitation. This feature does not meet the definition of an (a)(1) or (a)(2) water and is not located within an (a)(4) water. This feature does not relocate a tributary nor is it within a tributary.
Stream 5 Panel A	45	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	This feature is a shallow ephemeral swale that is only subject to water flow in direct response to precipitation. This feature does not meet the definition of an (a)(1) or (a)(2) water and is not located within an (a)(4) water. This feature does not relocate a tributary nor is it within a tributary
Stream 8 Panel A	42	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	This feature is a shallow ephemeral swale that is only subject to water flow in direct response to precipitation. This feature does not meet the definition of an (a)(1) or (a)(2) water and is not located within an (a)(4) water. This feature does not relocate a tributary nor is it within a tributary
Wetland 13 Panel A	0.06	acre(s)	(b)(1) Non-adjacent wetland.	This wetland does not abut an $(a)(1) - (a)(3)$ water; is not inundated by flooding from an $(a)(1) - (a)(3)$ water in a typical year; is not physically separated from an $(a)(1) - (a)(3)$ water only by a natural berm, bank, dune, or similar natural feature; or is not physically separated from an $(a)(1) - (a)(3)$ water only by an artificial dike, barrier, or similar artificial structure. Wet 13 is located approximately 1,291 ft northwest of Cypress Creek an $(a)(2)$ water.
Wetland 14 Panel A and B	0.06	acre(s)	(b)(1) Non- adjacent wetland.	This wetland does not abut an $(a)(1) - (a)(3)$ water; is not inundated by flooding from an $(a)(1) - (a)(3)$ water in a typical year; is not physically separated from an $(a)(1) - (a)(3)$ water only by a natural berm, bank, dune, or similar natural feature; or is not physically separated from an $(a)(1) - (a)(3)$ water only by an artificial dike, barrier, or similar artificial structure. Wet 14 is located approximately 918 ft northwest of Cypress Creek an $(a)(2)$ water.
Stream 7 Panel A	0.10	acre(s)	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	This feature is a shallow ephemeral swale that is only subject to water flow in direct response to precipitation. This feature does not meet the definition of an (a)(1) or (a)(2) water and is not located within an (a)(4) water. This feature does not relocate a tributary nor is it within a tributary.
Stream 13 Panel B	238	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	This feature is a shallow ephemeral swale that is only subject to water flow in direct response to precipitation. This feature does not meet the definition of an (a)(1) or (a)(2) water and is not located within an (a)(4) water. This feature does not relocate a tributary nor is it within a tributary.



Excluded waters ((b)(1) - (b))(12)):4		
Exclusion Name	Exclusion	n Size	Exclusion ⁵	Rationale for Exclusion Determination
Stream 10 Panel B	152	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	This feature is a shallow ephemeral swale that is only subject to water flow in direct response to precipitation. This feature does not meet the definition of an (a)(1) or (a)(2) water and is not located within an (a)(4) water. This feature does not relocate a tributary nor is it within a tributary.
Stream 9 Panel B	700	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	This feature is a shallow ephemeral swale that is only subject to water flow in direct response to precipitation. This feature does not meet the definition of an (a)(1) or (a)(2) water and is not located within an (a)(4) water. This feature does not relocate a tributary nor is it within a tributary.
Stream 11 Panel B	73	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	This feature is a shallow ephemeral swale that is only subject to water flow in direct response to precipitation. This feature does not meet the definition of an (a)(1) or (a)(2) water and is not located within an (a)(4) water. This feature does not relocate a tributary nor is it within a tributary.
Stream 12 Panel B	2188	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	This feature is a shallow ephemeral swale that is only subject to water flow in direct response to precipitation. This feature does not meet the definition of an (a)(1) or (a)(2) water and is not located within an (a)(4) water. This feature does not relocate a tributary nor is it within a tributary.

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: Pre-USACE Verified Wetland and Waterbody Delineation Report-HCFCD Project ID K500-23-00-E001/K500-23-00-E002, September 2020 This information is and is not sufficient for purposes of this AJD.

Rationale: Data errors were required throughout the report. Revisions dated September 2020

- ☐ Data sheets prepared by the Corps: Title(s) and/or date(s).
- Photographs: Aerial and Other: Aerials 1943, 1977, 1988, 2001, 07 Jan 2009, 07 Aug 2013, 01 Dec 2019, Site phots 20 Nov 2019.
- Previous Jurisdictional Determinations (AJDs or PJDs): See IIIC
- Antecedent Precipitation Tool: <u>provide detailed discussion in Section III.B.</u>
- ☐ USFWS NWI maps: Title(s) and/or date(s).
- USGS topographic maps: 7.5 min Spring, Texas 2013, 1995, 1982, 1960, 1920, 1916

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.



Data Source (select)	Name and/or date and other relevant information
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	N/A.
State/Local/Tribal Sources	N/A.
Other information (specify)	N/A.

B. Typical year assessment(s): In an effort to determine adjacency (as it pertains to hydrologic trends and the subject aquatic resources verified by SWG) an analysis was done using the APT tool, elevation data, aerial imagery & other relevant site-specific information. The APT is a tool that affords the user the capability to look at rainfall at a specific location in the recent past compared to long term precipitation. It provides results for short term precipitation (last 72 hours), the last 3 months (WETS score) and the APT result comparing the last 30 years from numerous nearby gages. It also reports the PDSI (drought index) rainfall & WebWimp water balance/hydrologic seasons information. WETS analysis produces a score between 6 and 18 noting a score of 6-9 is drier than normal, 10-14 is normal & 15-18 is wetter than normal. The APT uses climatic data collected from numerous nearby weather stations and produces the most reliable source for a full 30 years of precipitation data). Extreme rainfall in August 2017, Hurricane Harvey, >15 inches, however APT still averaged out to be normal conditions. Below are the results of dates run for this site. The site coridnates are located at an appx. 96.53 ft elevation. Here are the results for the APT test for aerials & site visit:

Date	Rain prior 72 hours	WETS (3 mth) score:	APT	Season	PDSI
19 Nov 2019	<1	13(N)	Normal	Wet	Normal
Agent Site Visi	t				
05 Feb 2020	0	9(D)	Drier	Wet	Mild Drought
COE Site Visit					
30 Dec 2016	<1	9(D)	Drier	Wet	Mild wetness
Google Earth					
30 Aug 2017	>15	18(W)	Wetter	Dry	Extrene wetness
Google Earth					
30 Dec 2014	~1.3	15(W)	Wetter	Wet	No rmal
Google Earth					
03 May 2016	<.5	14 (N)	Normal	Dry	Severe Wetness
Google Earth					
03 Mar 2016	0	10 (N)	Normal	Wet	Mild Wetness
Google Earth					

Climatic data was collected from Houston Intercont Airport, which is the closest station (8.3 mi) and is within the appropriate geographic region and is the most reliable source with a full 30 years of data. Furthermore, the precipitation assessment did not deviated from the 30th to 70th percentile of precipitation totals for the periodic range used. For each period, the 30-day precipitation total falls within the 70th and 30th percentiles for totals from the same date range over the preceding 30 years. Based on randomly selected resources the APT was calculated for 7 randonmaly selected resources and an determination of "normal," is made based on the condition value sums.

The determination regarding potential inundation due to flooding by the nearest waterway is based largely upon site specific information and scientific studies regarding flood plain correlation and elevation



information for bankfull and floodplains (e.g. study entitled: Hydrogeomorphological differentiation between floodplains and terraces by: Qina Yan, Toshiki Iwasaki, Andrew Stumpf, Patrick Belmont, Gary Parker & Praveen Kuma.) as well as review of historic site information (including precipitation data) and aerial photos of the site. The study referenced revealed that the 10-year flood plain elevation is located in a slightly higher elevation than bank full elevation in riverine systems. Noting per NWPR regulation, that bank full is anticipated to be located within the area that folds in a typical year. The aquatic resources (Wetlands 1-4, 6-10, 11, 15, beaver pond) are all located below bank full and within the projected 10-year flood plain elevation for this area. Therefore, these aquatic resources met criteria (a)(4) wetland inundated by flooding from an (a)(1)-(a)(3) water (Cypress Creek) in a typical year, and as such are jurisdictional.

Wetlands 13 and 14 are non-adjacent depressional wetlands that are non-jurisdictional (b)(1) waters. This is based on site-specific information, federal regulation, scientific and flood plain studies, and a review of aerials. These aquatic features do NOT abut an a)1-a)3 water, NOR would they be inundated by flooding of an a)1-a)3 water in a typical year, NOR are they physically separated from an a)1-a)3 water by a single natural barrier, NOR are they physically separated by an artificial barrier that allows direct surface hydrologic connection between the aquatic feature(s) in review and an a)1-a)3 water in a typical year.

Panel A and B Culverts are excluded as a (b)(1) water or water feature that is not identified in (a)(1)-(a)(4) and does not meet the other (b)(1) subcategories, these include underground or buried portions of a channel network (including culverts). These culverts do not sever any potential jurisdiction of a subject waterway.

Streams 4-13 meet the (b)(3) exclustion cirtieria: feature is a shallow ephemeral swale that is only subject to water flow in direct response to precipitation. Feature does not meet the definition of an (a)(1) or (a)(2) water and is not located within an (a)(4) water and does not relocate a tributary nor is it within a tributary. This is based on site-specific information, federal regulation, scientific and flood plain studies, and a review of aerials.

Stream 1 Cyrpess Creek Panel A&B (6,658 LF) and Stream 2 Spring Gully (3,110 LF) meet criteria: an (a)(2) Perennial that tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year. Based on visual observation and historic aerial imagery review of these tributaries, these feature exhibits perennial water flow.

C. Additional comments to support AJD: Base maps are 3 pages.

Associated or previous JDs w/in project site:

SWG-2019-00857, NWP 43 issued 09/28/2020, Out parcel on this action.

SWG-2017-00225, AJD issued 06/15/2017 for Spring Gully

SWG-2006-01437, D18897; HCPID/TC JESTER B, Rapanos AJD issued 01/01/2001

SWG-2006-01371, an amendment to DA Permit 24295 issued 08/21/2008

SWG-2006-01470, Permit Number: D16436; COPANO/PIPELINE, NPR issued 07/07/2007





