APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): February 14, 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

Albuquerque District, EPWU, Northgate diversion channel project, SPA-2021-00386

C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: Texas County/parish/borough: El Paso County City: El Paso Center coordinates of site (lat/long in degree decimal format): Lat. 31.86585°, Long106.463363° Universal Transverse Mercator: 13 361569.96 3526499.73 Name of nearest waterbody: Grande, Rio Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Name of watershed or Hydrologic Unit Code (HUC): Rio Grande-Fort Quitman, 13040100 ☐ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. ☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc) are associated with this action and are recorded on a different JD form: SPA-2012-00281-LCO (AJD)
D.	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): ☐ Office (Desk) Determination. Date: December 29, 2021 ☐ Field Determination. Date(s):
	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
	re Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the ew area. [Required] Waters subject to the ebb and flow of the tide. Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:
B.	CWA SECTION 404 DETERMINATION OF JURISDICTION.
The	re Are no "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]
	1. Waters of the U.S. a. Indicate presence of waters of U.S. in review area (check all that apply): TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters ² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands
	b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: linear feet, wide, and/or acres. Wetlands: acres.
	c. Limits (boundaries) of jurisdiction based on: Not Applicable. Elevation of established OHWM (if known):
	 Non-regulated waters/wetlands (check if applicable):³ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

Explain: The review areas include isolated aquatic features as described in additional comments to support this AJD.

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III.F.

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i)		neral Area Conditions: ershed size: Pick List
		inage area: Pick List
		rage annual rainfall: inches
		rage annual snowfall: inches
	1110	rage aimuai showtan. menes
(ii)	Phy	sical Characteristics:
	(a)	Relationship with TNW:
		Tributary flows directly into TNW.
		Tributary flows through Pick List tributaries before entering TNW.
		Project waters are Pick List river miles from TNW.
		Project waters are Pick List river miles from RPW.
		Project waters are Pick List aerial (straight) miles from TNW.
		Project waters are Pick List aerial (straight) miles from RPW.
		Project waters cross or serve as state boundaries. Explain:
		Identify flow route to TNW ⁵ :
		Tributary stream order, if known:
		Thouany stream order, it known.
	(b)	General Tributary Characteristics (check all that apply):
		Tributary is: Natural
		Artificial (man-made). Explain:
		Manipulated (man-altered). Explain:
		(man arerea). Explain.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

		Tributary properties with respect to top of bank (estimate): Average width: feet Average depth: feet Average side slopes: Pick List.
		Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain:
		Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Pick List Tributary gradient (approximate average slope): %
	(c)	Flow: Tributary provides for: Pick List Estimate average number of flow events in review area/year: Pick List Describe flow regime: Other information on duration and volume:
		Surface flow is: Pick List. Characteristics:
		Subsurface flow: Pick List. Explain findings: Dye (or other) test performed:
		Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): clear, natural line impressed on the bank changes in the character of soil destruction of terrestrial vegetation the presence of wrack line vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition water staining other (list): Discontinuous OHWM. ⁷ Explain:
		If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by: Mean High Water Mark indicated by: survey to available datum; physical markings/characteristics physical markings/characteristics vegetation lines/changes in vegetation types. tidal gauges other (list):
(iii)	Cha E	emical Characteristics: racterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). xplain: tify specific pollutants, if known:
(iv)	I	logical Characteristics. Channel supports (check all that apply): Riparian corridor. Characteristics (type, average width): Wetland fringe. Characteristics: Habitat for: Federally Listed species. Explain findings: Fish/spawn areas. Explain findings: Other environmentally-sensitive species. Explain findings: Aquatic/wildlife diversity. Explain findings:

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i)

	(i)	Phy	sical Characteristics:			
			General Wetland Characte	eristics:		
			Properties:			
			Wetland size: a	cres		
			Wetland type. Explain	1:		
			Wetland quality. Expl	ain:		
			Project wetlands cross or s	serve as state boundaries. Ex	plain:	
		(b)	General Flow Relationship Flow is: Pick List . Explain			
			Surface flow is: Pick List Characteristics:			
			Subsurface flow: Pick Lis Dye (or other) test			
		(c)	Wetland Adjacency Deter	mination with Non-TNW:		
			☐ Directly abutting			
			☐ Not directly abutting			
				ydrologic connection. Expla	nin:	
			Ecological connect			
			Separated by berm	/barrier. Explain:		
		(4)	Provinity (Palationship) t	o TNW		
		(u)	Project wetlands are Pick	List river miles from TNW.		
				ist aerial (straight) miles fro	m TNW	
			Flow is from: Pick List.	acriai (straight) innes 110	III 11VV.	
				ation of wetland as within the	e Pick List floodplain.	
	(ii)	Ch	emical Characteristics:			
	(11)			.g., water color is clear, broy	vn, oil film on surface; water qu	ality: general watershed
			haracteristics; etc.). Explain		wii, oli iliili oli surrace, water qu	anty, general watershee
			ntify specific pollutants, if k			
			7 -1			
	(iii)			etland supports (check all	that apply):	
			Riparian buffer. Characteri			
			Vegetation type/percent cov	er. Explain:		
		Ш	Habitat for:			
			Federally Listed specie			
			Fish/spawn areas. Expl		C 1:	
			Aquatic/wildlife divers	-sensitive species. Explain t	indings:	
			Aquade/ whether divers	sity. Explain findings.		
3.	Cha	aract	eristics of all wetlands adj	acent to the tributary (if a	ny)	
				d in the cumulative analysis:		
		App	proximately acres in	total are being considered in	the cumulative analysis.	
		_				
		For	each wetland, specify the fo	ollowing:		
			Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
						

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent

wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1.	TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: ☐ TNWs: linear feet, wide, Or acres. ☐ Wetlands adjacent to TNWs: acres.
2.	RPWs that flow directly or indirectly into TNWs. ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flow seasonally:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet wide. Other non-wetland waters: acres. Identify type(s) of waters:
3.	Non-RPWs ⁸ that flow directly or indirectly into TNWs. Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional waters within the review area (check all that apply): Tributary waters: linear feet, wide. Other non-wetland waters: acres. Identify type(s) of waters:
4.	Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

⁸See Footnote # 3.

	☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
	☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.
5.	Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.
6.	Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional wetlands in the review area: acres.
7.	Impoundments of jurisdictional waters. ⁹ As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional. ☐ Demonstrate that impoundment was created from "waters of the U.S.," or ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).
SU	CRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY CH WATERS (CHECK ALL THAT APPLY): 10 which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:
Ide	entify water body and summarize rationale supporting determination:
	ovide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet, wide. Other non-wetland waters: acres. Identify type(s) of waters: Wetlands: acres.
	ON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above):
fac	ovide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR tors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional gment (check all that apply):

E.

F.

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

		Non-wetland waters (i.e., rivers, streams): linear feet, wide. Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
	a fii	vide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such adding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): North Gate Diversion Channel: 5,932 linear feet, 15-55 (ft) wide. Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
SE	CTIC	ON IV: DATA SOURCES.
A.	and	PPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: AECOM Data sheets prepared/submitted by or on behalf of the applicant/consultant. ☐ Office concurs with data sheets/delineation report. ☐ Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: ☐ USGS NHD data. ☐ USGS 8 and 12 digit HUC maps. U.S. Geological Survey map(s). Cite scale & quad name: 1:24K; El Paso USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name: SPA-2021-200 NWI map for Northgate diversion channel State/Local wetland inventory map(s): FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: ☐ Aerial (Name & Date): satellite imagery on December 20, 2020 or ☐ Other (Name & Date): photos on March 12, 2021 Previous determination(s). File no. and date of response letter: Applicable/supporting case law: Applicable/supporting scientific literature: USDA/NRCS, Handbook 296 (2006); USACE, National Program of Inspection of Dams (1975), Eco Regions of Texas (2007). Other information (please specify):
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B. ADDITIONAL COMMENTS TO SUPPORT JD:

The review areas for this AJD total approximately 5,932-linear feet of an unnamed stream system labeled Northgate Diversion Channel and encompasses the location of one planned project by AECOM on behalf of El Paso Water Utilities.

The review area is located within the Fort Bliss Sump drainage system which is part of an existing storm water system for the City of El Paso. The Fort Bliss Sump drainage system includes an interconnected series of drainage basins, ponds, flood control dams (i.e., Northgate Dam and Range Dam), and the Fort Bliss Sump. The review is situated within the Chihuahuan Basins and Playas Ecological Region (24a) and the Low Mountains and Bajadas Sub-region (24c) residing well above the Rio Grande Floodplain (Griffin G.E et al, 2007). This location also resides in the Western Range and Irrigated Land Resource Region (D), specifically in Land Resource Area (MLRA) 42; Southern Desertic Basins, Plains, and Mountains (USDA Handbook 296, issued 2006). The general area has a moderate dry climate with rain primarily limited to the summer in the form of high intensity convective storm events during the months of July to September. The average annual precipitation for this area is between 8 to 14 inches which occurs in flash events with very little winter precipitation; snowfall is minimal to non-existent (USDA Handbook 296, issued 2006). The reach discussed in this AJD flows off of the eastern facing slopes of the Franklin Mountains in an eastern direction into the Northgate Dam. Discharges form the Northgate Dam flow under Highway 54 and continue East into the Range Dam. Discharges from the Range Dam flow into an open concrete lined channel in a southeastern direction under Railroad Drive into the Fort Bliss Sump. The Fort Bliss Sump serves as the terminus point for the Northgate Diversion channel since the structure severs the review area's downstream connection. The nearest Traditionally Navigable Water (TNW) is the Rio Grande, that resides approximately 10 miles South of the review area.

A previous jurisdictional determination (SPA-2012-00281) determined that ordinary flows for "Desert Wash-E" or the Northgate Diversion Channel is retained within the Northgate Dam and Range Dam. Noted within the 2012-281 AJD, the Range Dam and the Fort Bliss Sump contains more than the 100- and 50-year storm event flood waters respectively before discharge occures and terminating within the unnamed storm water retention pond. It was determined that drainages including the review area for the Northgate Diversion Channel indirectly contributing to the Fort Bliss Sump does not discharge flows into the Rio Grande; and does not have a nexus to interstate commerce.

Dam information:

- 1. The Northgate Dam as an earth dam constructed in 1973 and measures approximately 3,792 linear feet (Google©, 2021) in length and stands at a height of approximately 53 feet. The maximum capacity of the Northgate Dam is approximately 1,038 acre-feet (USACE, 1975).
- 2. Range Dam is an earth dam constructed in 1973 that measures approximately 7,274 linear feet (Google©, 2021) in length and stands at a height of approximately 32 feet. The maximum capacity of the Range Dam is approximately 908 acre-feet (USACE, 1975).
- 3. Fort Bliss Sump measures approximately 15,512 feet and includes an area of approximately 440 acres with the sump depression measuring approximately 30 feet below the crest of the dam (Google©, 2021). Additionally, the Sump retains more than the 100-200 year event.

Based on the data provided by the consultant and information obtained by the Corps Regulatory Division personnel, the review area for this AJD request does not contain waters of the United States.

References:

- 1. Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean, and the Pacific Basin (USDA Handbook 296, issued 2006. pp 1-669) found at https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_050898.pdf.
- 2. G. Griffith, S. Bryce, J. Omernik, and A. Rogers, (December 27, 2007), Eco Regions of Texas, in cooperation with the following agencies: Dynamic Corporation, U.S. Geological Survey, Texas Commission of Environmental Quality, and U.S. Environmental Protection Agency.
- 3. AECOM, 2021. El Paso Water Utility flow path #36 project Aquatic Resources Report. prepared on behalf of El Paso Water Utilities, April 12, 2021.
- 4. Google Earth Pro, Google©, 2021, Ruler measuring function.
- 5. U.S. Army Corps of Engineers, May, 1975, National Program of Inspection of Dams, D103.2:D18, Vol. 4. found at https://books.google.com/books?id=1QtaKF0RiJgC&pg=PT36&lpg=PT36&dq=Northgate+dam+el+paso,+tx+maximum+capacity&source=bl&ots=v4TYXaoVlN&sig=ACfU3U3iyScjk40zVLE31tjxLpRNiQuHnA&hl=en&sa=X&ved=2ahUKEwjQ7peE9fL0AhX0nGoFHRSPCtsO6AF6BAgCEAM#v=onepage&q=%20El%20Paso%2C%20tx%20&f=false.
- 7. U.S. Army Corps of Engineers, Aproved Jurisdictional Dertmination Form (2012), Albuquerque District, Desert Washes in Mountain Hills Area North East El Paso; Action Number: SPA-2012-00281-LCO.

Enclosures:

- 1. AECOM, Topo Map and Satellite imagery
- 2. Northgate diversion channel flowpath satellite imagry
- 3. Site photographs obtained by AECOM





