McCLELLAND CONSULTING ENGINEERS, INC.
DESIGNED TO SERVE

7302 Kanis Road
Little Rock, Arkansas 72204
(501) 371-0272
mce.us.com

April 17, 2025

WDD ARCHITECTS
5050 Northshore Lane
North Little Rock, Arkansas 72118

ATTN: Mr. Wallie Sprick, AIA
Principal | Executive Vice President/COO

RE: Section 404 Wetland Delineation
6310 South Highway 215
Charleston, Arkansas
MCE Project Number: 25-9610

Dear Mr. Sprick:

We are submitting herewith this Cover Letter relevant to the Section 404 Wetland Delineation of the subject property located at 6310 South Highway 215 in Charleston, Arkansas.

Mr. Jimmy Rogers, Senior Environmental Scientist with ECCI was retained to conduct this evaluation. The following conclusions were observed/determined during this evaluation:

- Nine (9) jurisdictional wetland features were observed within the project area totaling 0.97 acre.
- 20 likely non-jurisdictional (ephemeral) drainages were observed within the project area totaling 10,145 linear feet.
- 17 jurisdictional (relatively permanent) stream channels were observed within the project area totaling 35, 129 linear feet.
- Ten open water ponds totaling 5.41 acres were observed within the project area. Due to their hydrologic connectivity to regulated, relatively permanent waterways, and ultimately to a TNW (Traditionally Navigable Water), each of the ten ponds will likely be considered jurisdictional under Section 404 of the CWA (Clean Water Act).
- FEMA (Federal Emergency Management Agency) maps the entirety of the project area outside the 500-year floodplain.

We appreciate the opportunity to provide this service to you. If there are any questions regarding this Section 404 Wetland Delineation, please do not hesitate to contact us.

Respectfully Submitted,
McClelland Consulting Engineers, Inc.

Cody L. Traywick, P.G.
Geotechnical Supervisor | Project Manager

David M. Hubbard
Geotechnical Specialist

Enclosures: Section 404 Delineation - ~826-Acre South Highway 215 Site, Franklin County, Arkansas; ECCI Project # 5189-3023; April 11,2025

SECTION 404 DELINEATION
~826-ACRE SOUTH HIGHWAY 215 SITE
CHARLESTON, FRANKLIN COUNTY, ARKANSAS

APRIL 11, 2025

Prepared for:
MCCLELLAND CONSULTING ENGINEERS
ATTN: MR. STEVEN J. HEAD, P.E.
1580 EAST STEARNS STREET
FAYETTEVILLE, AR 72703

Prepared by:

ENGINEERING | COMPLIANCE | CONSTRUCTION
13000 CANTRELL ROAD
LITTLE ROCK, ARKANSAS 72223-1637
TELEPHONE: (501) 975-8100

ECCI Project No. 5189-3023

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1.0 INTRODUCTION

McClelland Consulting Engineers contracted with Engineering Compliance and Construction, Inc. (ECCI) of Little Rock, Arkansas, to delineate Section 404 wetlands and other waters of the United States (WOTUS) within the proposed project area of approximately 826 acres. The project area is located east of South Highway 215 in Charleston, Franklin County, Arkansas (Figure 1). The area of the delineation is mapped on the USGS *The National Map* Topo basemap for quadrangle Mulberry, AR (7.5-minute series) (Figures 2 and 3). The project area is located in Section 1, Township 8 North, Range 29 West, and Section 6, Township 8 North, Range 28 West. Approximate central coordinates of the project area are 35.4058°N, -94.0229°W (NAD 83).

2.0 MATERIALS AND METHODS

ECCI conducted a Level 3, routine wetland delineation as described in the US Army Corps of Engineers (USACE) *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). Field investigations for the delineation were conducted during March and April 2025. ECCI evaluated the area of the delineation for potential Section 404 jurisdictional areas, i.e., wetlands and other WOTUS, and complied with the USACE 1987 Manual and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region Version 2.0* (Engineer Research and Development Center 2012). The site was evaluated using the transect method, with supplemental sample points taken in areas needing additional characterization.

Sampling point locations were selected to evaluate areas appearing to have at least some potential for USACE regulation under Section 404 of the Clean Water Act (CWA), and to evaluate the project area for the purpose of collecting data regarding vegetative community type(s). Fifty-eight (58) sampling point locations were established within the project area; data were collected on vegetation, hydrology, and soils at each location (Figures 3 and 4) (Attachment A).

The *Keys to the Flora of Arkansas* (Smith 1994) was used to confirm certain plant identifications and the *USACE Cold Regions Research and Engineering Laboratory's Eastern Mountains and Piedmont Regional Wetland Plant List* (2020) was used to determine wetland indicator status for the dominant species. Soil pits were dug with a sharpshooter shovel to a depth of approximately 16 to 18 inches, where possible, and soil colors were determined with the aid of Munsell color charts. Soil survey data from the Natural Resources Conservation Service's (NRCS) *Web Soil Survey* (2019) were used to determine the map units for the area. Also, the NRCS (Soil Data Access) *Franklin County, Arkansas Hydric Soils Map List and Map Units with Hydric Inclusions* was used to assist in the selection of sampling points appearing to have a potential for the occurrence of hydric soils.

A smartphone using ARCGIS field maps paired with a Geode GPS with sub-meter accuracy, aerial photography, and LiDAR topographic imagery were used for marking sampling site locations and potential Section 404 feature boundaries.

3.0 FINDINGS AND RESULTS

3.1 General Site Description

Topography of the project area is somewhat hilly, sloping generally toward the south toward Onion Creek, which flows generally west near the southern property boundary. Two primary plant communities were observed within the project area, as described in Section 3.2.1 below. Nine wetlands, ten ponds, 16 relatively permanent waters (RPW), and 19 non-RPW ephemeral drainage channels were observed within the project area. Figures 1 through 4 provide maps of the project area. Attachment A provides completed sampling point data sheets. Attachment B provides representative photos of the project area. Attachment C provides various reference maps of the project area.

The 1994-2001 aerial images show the project area to have been converted from mostly forested with some clear areas, to mostly cleared with some forested areas, and additional clearing occurring between 2001 and 2006. Since 2006, the site appears to have been maintained in mostly pasture use with forested stream corridors and a forested area in the northeastern site

corner. A powerline crosses the site from northwest to southeast in the western half. Unimproved gravel and dirt trails provide access throughout the property.

3.2 Wetlands

ECCI observed nine areas, totaling approximately 0.97 acre, that meet the criteria for classification as a wetland within the project area, all associated with streams or current or former agricultural ponds. Wetlands associated with RPWs would be considered jurisdictional under the current interpretation of Section 404 of the Clean Water Act, as discussed in section 3.3.1. Wetlands are summarized in Table 3-1.

The 1906, 1951, 1954, 1956, 1972, 1977, 1988, 2014, 2017, and 2020 USGS topographic maps illustrate no wetland features within the project area. The National Wetlands Inventory (NWI) (Attachment C) maps one wetland feature, i.e., the upstream reach of Onion Creek located in the northeastern portion of the project aera, identified as a palustrine, forested, broad-leaved deciduous, temporarily flooded linear wetland within the project area. Onion Creek was observed to be gravel and rock-bottomed with perennial flow and therefore is identified as an RPW (see Section 3.3).

3.2.1 Vegetation

The project area consists of two primary vegetation communities, i.e.,

- Upland xeric mixed forest community; and
- Upland xeric maintained pasture community;

The upland xeric mixed forest community was observed in the northeastern corner of the project area and along stream corridors throughout the site. The largely dominant vegetative species observed in this community are Eastern red cedar (*Juniperus virginiana*), loblolly pine (*Pinus taeda*), and post oak (*Quercus stellata*). Other commonly observed species include bitternut hickory (*Carya cordiformis*) and various blackberries (*Rubus* sp.).

The upland xeric maintained pasture community was observed throughout the project area and was characterized by scattered individual and clumped evergreen and oak trees. The dominant vegetation species in this community include Bermuda grass (*Cynodon dactylon*),

broom sedge (*Andropogon virginicus*), white clover (*Trifolium repens*), and hogwart (*Croton capitatus*).

In addition to the primary vegetative communities, other relatively minor (in terms of overall onsite acreage) vegetative communities, such as herbaceous wetland areas, forested riparian areas, a maintained herbaceous lawn community area, cleared/maintained trails, etc. were also observed. An herbaceous wetland community was observed in all nine wetlands, though as a proportion of the entire site, this vegetative community is not considered dominant. Dominant species observed within the herbaceous wetland community include soft rush (*Juncus effusus*), buttercup (*Ranunculus* sp.), and false nutsedge (*Cyperus strigosus*).

Positive indicators of hydrophytic vegetation were observed at 10 of the 58 sampling point locations, nine of which are located within delineated wetlands (Table 3-2; Attachment A). Representative photos of various vegetative communities are provided in Attachment B.

3.2.2 Wetland Hydrology

Hydrology potentially associated with wetlands as described in the USACE wetland delineation manual was observed at 10 of the 58 sampling point locations (Table 3-2; Attachment A). Nine of the ten sample points exhibiting hydrology are located within delineated wetlands.

Observed hydrology at S-03, S-05, and T3-2 is believed to be due to subsurface seepage from upslope farm ponds. Hydrology associated with wetlands was observed at these locations, as well as hydrophytic vegetation and hydric soils. Hydrology observed at S-07 and S-11 is due to the locations being former farm ponds which no longer detain open water due to deconstruction or neglect; both points exhibit hydrophytic vegetation and hydric soils. Hydrology at S-01, S-02, S-12, and T1-2 is associated with flooding from adjacent streams. Hydrology at S-09 is due to local runoff and rainfall.

3.2.3 Soils

Table 3-3 summarizes the nine soil map units within the project area by the NRCS *Web Soil Survey 3.4* (Attachment C). The hydric soil status of each soil map unit is taken from the

NRCS hydric soils list for Franklin County, Arkansas. Positive indicators of hydric soil were observed at 11 of the 58 sampling point locations, nine of which are located within delineated wetlands (Table 3-2; Attachment A).

Table 3-1 Wetland Summary

Feature ID	Size (acres within project area)	Characteristics	Hydroperiod	Associated non-wetland feature	Likely 404-Jurisdictional Feature?	Photo ID
WET-A	0.04	Wide, vegetated segment of stream	Perennial	RPW-9	Yes	91
WET-B	0.08	Adjacent to farm pond, berm leaking	Perennial	RPW-12	Yes	92
WET-C	0.08	Depression	Seasonal	RPW-13	Yes	n/a
WET-D	0.21	Linear wetland	Seasonal	EPH-14 / RPW-14	Yes	93
WET-E(a)	0.04	Former farm pond, now vegetated	Seasonal	EPH-15	Yes	94
WET-E(b)	0.07	Linear wetland	Seasonal	EPH-15	Yes	95
WET-F	0.26	Depression	Seasonal	RPW-16	Yes	96
WET-G	0.09	Wide, vegetated segment of stream	Perennial	RPW-16	Yes	97
WET-H	0.07	Wide, vegetated segment of stream	Perennial	RPW-14	Yes	98
WET-I	0.03	Adjacent to farm pond, berm leaking	Perennial	EPH-13, OW-7	Yes	99

Table 3-2 Summary of findings at each of the sampling point locations

Sampling Point	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Technical Wetland
S-01	Yes	No	Yes	No
S-02	Yes	Yes	Yes	Yes
S-03	Yes	Yes	Yes	Yes
S-04	No	No	No	No

Sampling Point	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Technical Wetland
S-05	Yes	Yes	Yes	Yes
S-06	No	Yes	No	No
S-07	Yes	Yes	Yes	Yes
S-08	No	Yes	No	No
S-09	Yes	Yes	Yes	Yes
S-10	No	No	No	No
S-11	Yes	Yes	Yes	Yes
S-12	Yes	Yes	Yes	Yes
S-13	No	No	No	No
T1-1	No	No	No	No
T1-2	Yes	Yes	Yes	Yes
T1-3	No	No	No	No
T1-4	No	No	No	No
T2-1	No	No	No	No
T2-2	No	No	No	No
T2-3	No	No	No	No
T2-4	No	No	No	No
T2-5	No	No	No	No
T2-6	No	No	No	No
T2-7	No	No	No	No
T2-8	No	No	No	No
T3-1	No	No	No	No
T3-2	Yes	Yes	Yes	Yes
T3-3	No	No	No	No
T3-4	No	No	No	No
T3-5	No	No	No	No
T3-6	No	No	No	No
T4-1	No	No	No	No
T4-2	No	No	No	No
T4-3	No	No	No	No
T4-4	No	No	No	No
T5-1	No	No	No	No
T5-2	No	No	No	No
T5-3	No	No	No	No
T5-4	No	No	No	No
T6-1	No	No	No	No
T6-2	No	No	No	No
T6-3	No	No	No	No
T6-4	No	No	No	No
T6-5	No	No	No	No
T6-6	No	No	No	No
T6-7	No	No	No	No
T7-1	No	No	No	No
T7-2	No	No	No	No
T7-3	No	No	No	No
T7-4	No	No	No	No

Sampling Point	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Technical Wetland
T8-1	No	No	No	No
T8-2	No	No	No	No
T8-3	No	No	No	No
T9-1	No	No	No	No
T9-2	No	No	No	No
T10-1	No	No	No	No
T10-2	No	No	No	No
T11-1	No	No	No	No

Table 3-3 Summary of soil map units

Soil Map Unit Name	Description	Percent of Site	Hydric
Franklin County, Arkansas			
Nella gravelly fine sandy loam, 3 to 8 percent slopes	Prime Farmland, Well drained soils found on mountain slopes and hillslopes.	0.5	No
Enders gravelly silt loam, 3 to 8 percent slopes, eroded	Well drained soils found on hillslopes.	0.3	No
Enders gravelly silt loam, 8 to 20 percent slopes, eroded	Well drained soils found on hillslopes.	0.7	No
Linker fine sandy loam, 3 to 8 percent slopes	Well drained soils found on hills and mountains.	4	No
Montevallo-Mountainburg complex, 1 to 12 percent slopes	Somewhat excessively drained soils found on hills.	0.4	No
Montevallo-Mountainburg complex, 12 to 40 percent slopes	Somewhat excessively drained soils found on hills.	<0.1	No
Mountainburg gravelly fine sandy loam, 3 to 8 percent slopes	Well drained soils found on hillslopes.	37	No
Mountainburg stony fine sandy loam, 1 to 12 percent slopes, rocky	Well drained soils found on hillslopes.	55	No
Pickwick silt loam, 1 to 3 percent slopes, eroded	Well drained soils found on stream terraces.	0.1	No
Water	N/A	2	N/A

3.3 Other Waters of the US

The1906, 1951, 1954, 1956, 1972, 1977, 1988, 2014, 2017, and 2020 USGS topographic maps illustrate various stream features within the project area. Observed stream channels and ponds and their mapping history are summarized in Table 3-4. Onion Creek, flowing westward and identified as RPW-3 onsite, is characterized by braided ephemeral and perennial (RPW)

channels in the northeastern region of the site and a single channel at its entry into the site at the northern site boundary and in the southern region of the site. As the primary channel onsite, RPW-3 receives direct and indirect flow from all ephemeral channels and RPWs, as well as all onsite ponds and wetlands.

The NWI (Attachment C) maps four channels extending from north to south across the project area as R4SBC (riverine, intermittent, seasonally flooded, streambed) and R5UBH (riverine, unknown perennial, unconsolidated bottom, permanently flooded) and flowing into the east-west oriented Onion Creek. Onion Creek is identified as a wetland (PFO1A) in the northeastern region of the site and as a R2UBH (riverine, lower perennial, unconsolidated bottom, permanently flooded) stream in the southern portion of the site. Two ponds are mapped within the site, both classified as PUBHh (palustrine, unconsolidated bottom, permanently flooded, impounded).

During the delineation, non-wetland aquatic features were observed onsite as described in Table 3-4. Ten open water ponds, totaling 5.41 acres, were observed throughout the project area. Twenty ephemeral drainages (EPH-1 through EPH-20), totaling 10,145 linear feet, were observed and were dry during both site visits. It appears that the sandy/rocky nature of the soils may allow water to infiltrate the stream beds and therefore do not appear to have relatively permanent flow throughout the channel reaches. Seventeen relatively permanent waters (RPW-1 through RPW-17), totaling 35,129 linear feet, were observed, each of which contained flowing water throughout a majority of their onsite length during one or both site visits.

3.3.1 Other waters Section 404 Jurisdiction

The relative permanence of waters is based on the "relatively permanent standard" which refers to "…flowing or standing water year-round or continuously during certain times of the year. Relatively permanent waters do not include tributaries with flowing or standing surface water only for a short duration in direct response to precipitation." (EPA Revised Definition of "Waters of the United States" Response to Comments Document, 2022). The Supreme Court of the United States (SCOTUS) decision in *Sackett v EPA (598 US 651*) further promulgates that Section 404 CWA "water of the United States" are "only those relatively permanent, standing or

continuously flowing bodies of water". As neither SCOTUS nor the EPA have redefined the 2022 definition of "relatively permanent", the 2022 definition is relied on.

Due to their classification as non-RPWs, EPH-1 through EPH-20 will likely not be considered jurisdictional, according to the pre-2015 regulatory regime, consistent with the Supreme Court's decision in *Sackett v EPA (598 US 651*) under Section 404 of the CWA.

Due to their classification as RPWs and ultimate direct surface hydrologic connection to a TNW (see Section3.4), RPW-1 through RPW-17 will be considered jurisdictional, according to the pre-2015 regulatory regime, consistent with the Supreme Court's decision in *Sackett v EPA (598 US 651*) under Section 404 of the CWA. Due to its direct surface hydrologic connection to RPW-1, OW-1 will also be considered jurisdictional, according to the pre-2015 regulatory regime, consistent with the Supreme Court's decision in *Sackett v EPA (598 US 651*) under Section 404 of the CWA.

Table 3-4 Summary of non-wetland aquatic features within the project area

Feature Name	Hydroperiod	NWI	USGS	Width (ft.)	Depth (ft.)	Size (onsite)*	Substrate	Jurisdictional	Figure Panel Number	Photo Number
RPW-1	Relatively permanent	Unmapped	Unmapped	2 - 8	0.25 - 1	1,101 lf	Bedrock, gravel, cobble	Yes	3-434-4	n/a
RPW-2	Relatively permanent	Unmapped	Unmapped	6	0.75	102 lf	Gravel, cobble, boulder, bedrock	Yes	3-434-4	55
RPW-3 (Onion Creek)	Relatively permanent, Braided channels	PFO1A[1] (Single Channel), R2UBH[2]	1987, 2011, 2014, 2017, 2020, 2024 (partial)	16	3	8,213 lf	Cobble, Gravel, Silt	Yes	3-3/4-3, 3-4/4-4, 3-5/4-5, 3-6/4-6	56-61
RPW-3a		(see RPW-3)	(see RPW-3)	2.5	0.75	252 lf	Cobble, bedrock	Yes	3-4/4-4	57
RPW-3b				8	1	114 lf	Cobble, boulder, bedrock	Yes	3-4/4-4	n/a
RPW-3c				Barely defined		189 lf	Gravel	Yes	3-4/4-4	n/a
RPW-4	Relatively permanent	Unmapped	Unmapped	5	0.5	234 lf	Gravel, cobble, boulder, bedrock	Yes	3-4/4-4	62
RPW-5	Relatively permanent	Unmapped	Unmapped	2	0.25	306 lf	Silt, gravel	Yes	3-3/4-3	63
RPW-6	Relatively permanent	R4SBC[3] at confluence with RPW-7	1987, 2011, 2014, 2017, 2020, 2024 (partial)	2	0.5	5,198 lf	Silt, gravel	Yes	3-3/4-3, 3-5/4-5	64-66
RPW-7	Relatively permanent	R4SBC, R5UBH[4]	1987, 2011, 2014, 2017, 2020, 2024 (partial)	10	0.5	916 lf	Silt, gravel	Yes	3-3/4-3	67
RPW-8	Relatively permanent	Unmapped	Unmapped	12	0.25	239 lf	Gravel	Yes	3-2/4-2	68
RPW-9	Relatively permanent	Unmapped	Unmapped	6	1.5	4,588 lf	Silt, gravel, cobble, boulder, bedrock	Yes	3-2/4-2	69
RPW-10	Relatively permanent	Unmapped	Unmapped	6	1	590 lf	Gravel, cobble, boulder, bedrock	Yes	3-2/4-2	70
RPW-11	Relatively permanent	R4SBC, R5UBH	1987, 2011, 2014, 2017, 2020, 2024	6	1	1,943 lf	Cobble, boulder, bedrock	Yes	3-1/4-1	71

Feature Name	Hydroperiod	NWI	USGS	Width (ft.)	Depth (ft.)	Size (onsite)*	Substrate	Jurisdictional	Figure Panel Number	Photo Number
RPW-12	Relatively permanent	R4SBC, R5UBH	1987, 2011, 2014, 2017, 2020, 2024	6	0.5	2,526 lf	Cobble, bedrock, partially vegetated	Yes	3-5/4-5	72
RPW-13	Relatively permanent	Unmapped	Unmapped	1 - 5	0.3	1,236 lf	Silt, vegetated	Yes	3-5/4-5, 3-6/4-6	73
RPW-14	Relatively permanent	R4SBC	1987, 2011, 2014, 2017, 2020, 2024	10	2	3,695 lf	Cobble and bedrock	Yes	3-1/4-1, 3-6/4-6, 3-7/4-7	74-76
RPW-15	Relatively permanent	R4SBC	1987, 2011, 2014, 2017, 2020, 2024	6	0.5	1,993 lf	Cobble, boulder, bedrock	Yes	3-7/4-7, 3-8/4-8	77-79
RPW-15a	Relatively permanent	Unmapped	Unmapped	6	0.5	89 lf	Cobble, boulder, bedrock	Yes	3-7/4-7	79
RPW-16	Relatively permanent	Unmapped	Unmapped	3	1	1,247 lf	Silt, gravel, cobble	Yes	3-7/4-7	80
RPW-17	Relatively permanent	Unmapped	Unmapped	5	0.5	358 lf	Gravel, cobble, bedrock	Yes	3-6/4-6	81
EPH-1	Ephemeral braided with RPW-3	Unmapped	Unmapped	---	---	190 lf	---	No	3-4/4-4	43
EPH-2a		Unmapped	Unmapped	---	---	120 lf	---	No	3-4/4-4	n/a
EPH-2b		Unmapped	Unmapped	---	---	17 lf	---	No	3-4/4-4	n/a
EPH-3		Unmapped	Unmapped	---	---	62 lf	---	No	3-4/4-4	n/a
EPH-4		Unmapped	Unmapped	---	---	90 lf	---	No	3-4/4-4	44
EPH-5a	Ephemeral	Unmapped	Unmapped	---	---	1,098 lf	---	No	3-3/4-3	45
EPH-5b	Ephemeral	Unmapped	Unmapped	---	---	382 lf	---	No	3-3/4-3	46
EPH-5c	Ephemeral	Unmapped	Unmapped	---	---	366 lf	---	No	3-3/4-3	47
EPH-6	Ephemeral	Unmapped	Unmapped	---	---	129 lf	---	No	3-3/4-3	n/a
EPH-7	Ephemeral	R4SBC	Unmapped	---	---	26 lf	---	No	3-3/4-3	n/a
EPH-8	Ephemeral	Unmapped	Unmapped	---	---	1,537 lf	---	No	3-2/4-2	n/a
EPH-9	Ephemeral	Unmapped	Unmapped	---	---	364 lf	---	No	3-2/4-2	n/a
EPH-10	Ephemeral	Unmapped	Unmapped	---	---	1,038 lf	---	No	3-2/4-2	n/a
EPH-11	Ephemeral	R4SBC	2011, 2014, 2017, 2020, 2024	---	---	239 lf	---	No	3-1/4-1	n/a
EPH-12	Ephemeral	Unmapped	Unmapped	---	---	584 lf	---	No	3-6/4-6	n/a

Feature Name	Hydroperiod	NWI	USGS	Width (ft.)	Depth (ft.)	Size (onsite)*	Substrate	Jurisdictional	Figure Panel Number	Photo Number
EPH-13	Ephemeral	Unmapped	Unmapped	---	---	942 lf	---	No	3-1/4-1	48-49
EPH-14	Ephemeral	Unmapped	Unmapped	---	---	131 lf	---	No	3-1/4-1	50
EPH-15	Ephemeral	Unmapped	Unmapped	---	---	291 lf	---	No	3-7/4-7	51
EPH-16	Ephemeral	Unmapped	Unmapped	---	---	501 lf	---	No	3-7/4-7	52
EPH-17	Ephemeral	Unmapped	Unmapped	---	---	845 lf	---	No	3-6/4-6	53
EPH-18	Ephemeral	Unmapped	Unmapped	---	---	139 lf	---	No	3-5/4-5	n/a
EPH-19	Ephemeral	Unmapped	Unmapped	---	---	820 lf	---	No	3-3/4-3	54
EPH-20	Ephemeral	Unmapped	Unmapped	---		234 lf	---	No	3-3/4-3	n/a
				Associated Feature						
OW-1	Open water, permanent	Unmapped	2011, 2014, 2017, 2020, 2024	RPW-3		0.70	---	Yes	3-3/4-3	82
OW-2	Open water, permanent	Unmapped	2011, 2014, 2017, 2020, 2024	RPW-6 / RPW-7		0.11	---	Yes	3-3/4-3	83
OW-3	Open water, permanent	Unmapped	2011, 2014, 2017, 2020, 2024	RPW-6 / RPW-8		0.15	---	Yes	3-2/4-2	84
OW-4	Open water, permanent	Unmapped	2011, 2014, 2017, 2020, 2024	RPW-6		0.31	---	Yes	3-5/4-5	85
OW-5	Open water, permanent	PUBHh[5]	1987, 2011, 2014, 2017, 2020, 2024	RPW-10 / RPW-11 / RPW-12		3.08	---	Yes	3-1/4-1, 3-2/4-2, 3-5/4-5	86
OW-6	Open water, permanent	Unmapped	2011, 2014, 2017, 2020, 2024	RPW-13		0.08	---	Yes	3-6/4-6	87
OW-7	Open water, permanent	PUBHh	1987, 2011, 2014, 2017, 2020, 2024	EPH-13		0.57	---	No	3-1/4-1	88
OW-8	Open water, permanent	Unmapped	Unmapped	RPW-14		0.11	---	Yes	3-1/4-1	89
OW-9	Open water, permanent	Unmapped	Unmapped	RPW-15 / RPW-16		0.25	---	Yes	3-7/4-7	90
OW-10	Open water, permanent	Unmapped	Unmapped	EPH-16		0.05	---	No	3-7/4-7	n/a

*lf – Linear Feet
*ac - Acre

PFO1A[1]– palustrine, forested, broad-leaved deciduous, temporarily flooded

R2UBH[2] – riverine, lower perennial, unconsolidated bottom, permanently flooded

R4SBC[3]– riverine, intermittent, streambed, seasonally flooded

R5UBH[4]– riverine, unknown perennial, unconsolidated bottom, permanently flooded

PUBHh[5]- palustrine, unconsolidated bottom, permanently flooded, diked/impounded

3.4 Downstream Hydrologic Connectivity/Relative Permanence

Drainage from the site generally flows into Onion Creek (RPW-3) near the southern site boundary. Onion Creek flows west into Big Creek just before Big Creek reaches the Arkansas River, a Traditionally Navigable Water (TNW).

4.0 FEMA 100-YEAR FLOODPLAIN AND FLOODWAY ISSUES

The Federal Emergency Management Agency (FEMA) maps the entirety of the project area as unshaded Zone X. Unshaded Zone X is a FEMA designation for areas of minimal flood hazard that are outside the 0.2 percent annual-chance flood. FEMA Flood Insurance Rate Map (FIRM) panel 0504320300D is provided in Attachment C.

5.0 SUMMARY AND CONCLUSIONS

- ECCI observed nine jurisdictional wetland features within the project area totaling 0.97 acre.
- ECCI observed 20 likely non-jurisdictional (ephemeral) drainages within the project area totaling 10,145 linear feet.
- ECCI observed 17 jurisdictional (relatively permanent) stream channels within the project area, totaling 35,129 linear feet.
- ECCI observed ten open water ponds totaling 5.41 acres within the project area. Due to their hydrologic connectivity to regulated, relatively permanent waterways, and ultimately to a TNW, each of the ten ponds will likely be considered jurisdictional under Section 404 of the CWA.
- FEMA maps the entirety of the project area outside the 500-year floodplain.