# ENVIRONMENTAL ASSESSMENT

# **APPENDIX H**

Preliminary Jurisdictional
Determination (PJD) and Wetland
Delineation Report



# **DEPARTMENT OF THE ARMY**

LITTLE ROCK DISTRICT, CORPS OF ENGINEERS
POST OFFICE BOX 867
LITTLE ROCK, ARKANSAS 72203-0867
www.swl.usace.army.mil/

March 25, 2019

**Regulatory Division** 

FILE No. SWL-2018-00444

Ms. Cassie Schmidt Garver 4701 Northshore Drive North Little Rock, Arkansas 72118

Dear Ms. Schmidt:

Please refer to your letter dated November 9, 2018, concerning a waters of the United States (WoUS) determination of the subject property, in sections 26, 34, and 35, T. 1 S., R. 14 W., Bryant, Saline County, Arkansas. In response to your informed, voluntary request, this letter provides a preliminary jurisdictional determination (PJD) that identifies aquatic resources that may be WoUS on the property and the Department of the Army (DA) permit requirements pursuant to Section 404 of the Clean Water Act (33 U.S. Code 1344).

My review revealed that the property may contain areas that may be WoUS. Approximately 4.39 acres of wetlands and 2,039 linear feet of stream were identified. The approximate location of these areas is shown on the enclosed map of the site.

This PJD is advisory in nature. If you wish to receive an approved jurisdictional determination (AJD) for the property, you must request one. In order to expedite the review, we suggest you provide our office with a delineation of all WoUS within the property using Corps approved methodology. An AJD is generally valid for a 5-year period, incorporates administrative appeal rights, and specifically identifies the presence or absence, the location, and the extent of WoUS on the property. Delineations done by consultants are not official until approved by the Corps of Engineers.

Please be advised that the discharge of dredged or fill material in WoUS, requires a DA permit prior to beginning work in most situations. A permit is required pursuant to Section 404 of the Clean Water Act. The clearing of wetlands with mechanized equipment; landleveling; construction of ditches, dikes, and dams; placement of fill to raise the elevation of a site; and stabilization of banks are examples of activities that may require a permit. All of these activities typically involve the discharge of dredged or fill material in WoUS.

Your cooperation in the Regulatory Program is appreciated. If you have any questions, please contact me at (501) 340-1385 and refer to No. **SWL-2018-00444**.

Sincerely,

Lisa Boyle

Project Manager

Enclosures

cc:

Pine Bluff PO Ch, Regulatory Enf

# PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): November 9, 2018

# B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:

Mrs. Cassie P. Schmidt 2049 E. Joyce Blvd Suite 400 Fayetteville, AR 72703

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: CESWL, Little Rock District, City of Bryant, Bryant Parkway, Alternative B, 2018-00444

# D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: Arkansas

County: Saline Co.

City: Bryant

Center coordinates of site: Latitude and Longitude (NAD 83):

Latitude: 34.601090 North, Longitude: -92.477833 West

Name of nearest waterbody: Crooked Creek

# E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination.

Date: Date

Field Determination.

Date(s): February 1, 2019

# TABLE OF AQUATIC RESOURCES IN REVIEW ARE WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION

Site Number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated Amount of Aquatic Resource in Review Area (acreage and linear feet, if applicable)	Type of Aquatic Resource (i.e. wetland, stream, impoundment, etc.)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
Wetland 1	34.587978	-92.486975	0.04 ac	PEM	Section 404
Wetland 2	34.591940	-92.482648	0.02 ac	PEM	Section 404
Wetland 3	34.597070	-92.481068	0.90 ac	PFO	Section 404
Wetland 4a	34.598614	-92.479237	0.22 ac	PFO	Section 404
Wetland 4b	34.598522	-92.479416	0.21 ac	PEM	Section 404
Wetland 5	34.600717	-92.477828	0.10 ac	PFO	Section 404
Wetland 6	34.603165	-92.476944	0.19 ac	PEM	Section 404
Wetland 7	34.605476	-92.475279	0.11 ac	PEM	Section 404
Wetland 8	34.608383	-92.474618	0.61 ac	PFO	Section 404
Wetland 9	34.609277	-92.476149	1.99 ac	PFO	Section 404
			•		
OW 2a	34.596931	-92.481354	111 LF	Ephemeral	Section 404
OW 2b	34.597176	-92.480988	134 LF	Ephemeral	Section 404

OW 3	34.598907	-92.479108	57 LF	Ephemeral	Section 404
OW 4a	34.598929	-92.478958	248 LF	Ephemeral	Section 404
OW 4b	34.600004	-92.478519	<b>77</b> LF	Ephemeral	Section 404
OW 5a	34.608790	-92.475944	94 LF	Perennial	Section 404
OW 5b	34.608775	-92.475289	131 LF	Perennial	Section 404
OW 6	34.609791	-92.476543	1,187 LF	Ephemeral	Section 404

- 1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
- 2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7)

whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there "may be" waters of the U.S. and/or that there "may be" navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply)- checked items should be included in case file and, where checked and requested, appropriately reference sources below):

<b> </b> ₹	Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: see attached Wetland Delineation			
<b>[</b> ]	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.			
П	Data sheets prepared by the Corps: Click here to enter text.			
П	Corps navigable waters' study: Click here to enter text.			
П	U.S. Geological Survey Hydrologic Atlas: Click here to enter text.			
	□ USGS NHD data.			
	USGS 8 and 12 digit HUC maps.			
[기	U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Bryant, AR			
데	USDA Natural Resources Conservation Service Soil Survey. Citation: NRCS Websoil survey & Haley et al, 1979.			
이	National wetlands inventory map(s). Cite name: USFWS Online NWI Mapper			
	State/Local wetland inventory map(s): Click here to enter text.			
V	FEMA/FIRM maps: FIRM Panel 0380D for Saline Co.; Panel 380 of 575			
<b> </b>	1 100-year Floodplain Elevation is: 352 feet (National Geodectic Vertical Datum of 1929)			
v	Photographs: 🔽 Aerial (Name & Date): 2017			
П	or $\sqcap$ Other (Name & Date): Click here to enter text.			
	Previous determination(s). File no. and date of response letter: Click here to enter text.			
	Applicable/supporting case law: Click here to enter text.			
	Applicable/supporting scientific literature: Click here to enter text.			
П	Other information (please specify): Click here to enter text.			
MP(	ORTANT NOTE: The information recorded on this form has not necessarily been verified by the			
Corp	s and should not be relied upon for later jurisdictional determinations.			

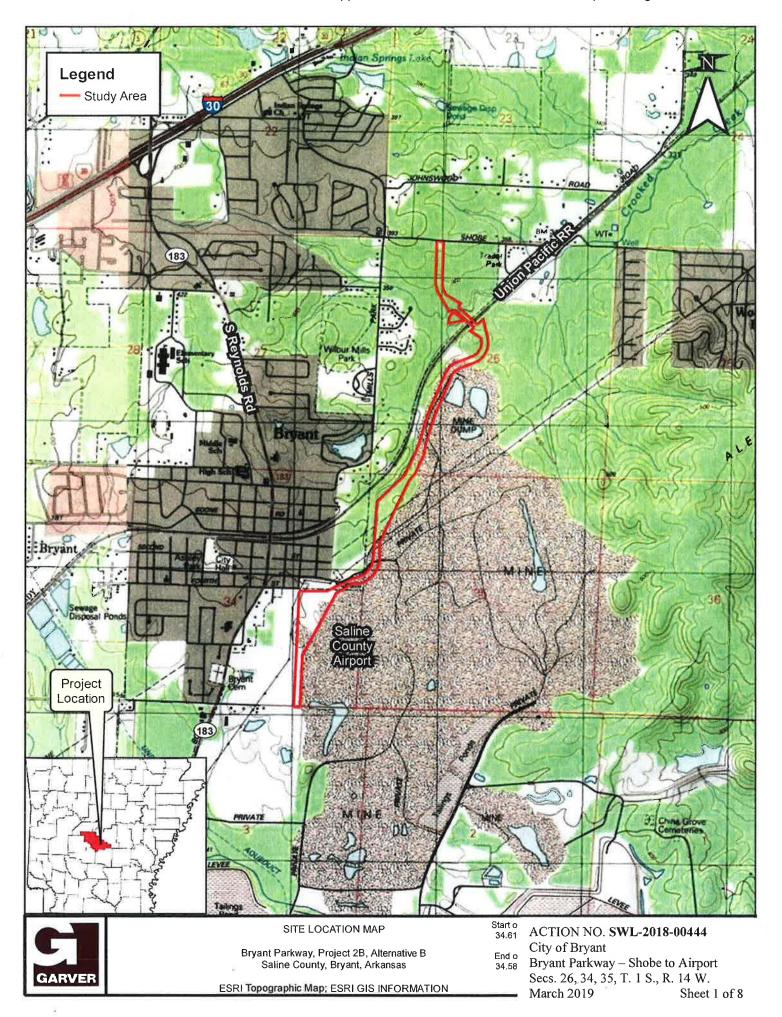
Lisa Boyls
3/25/2019
Signature and date of Regulatory Project

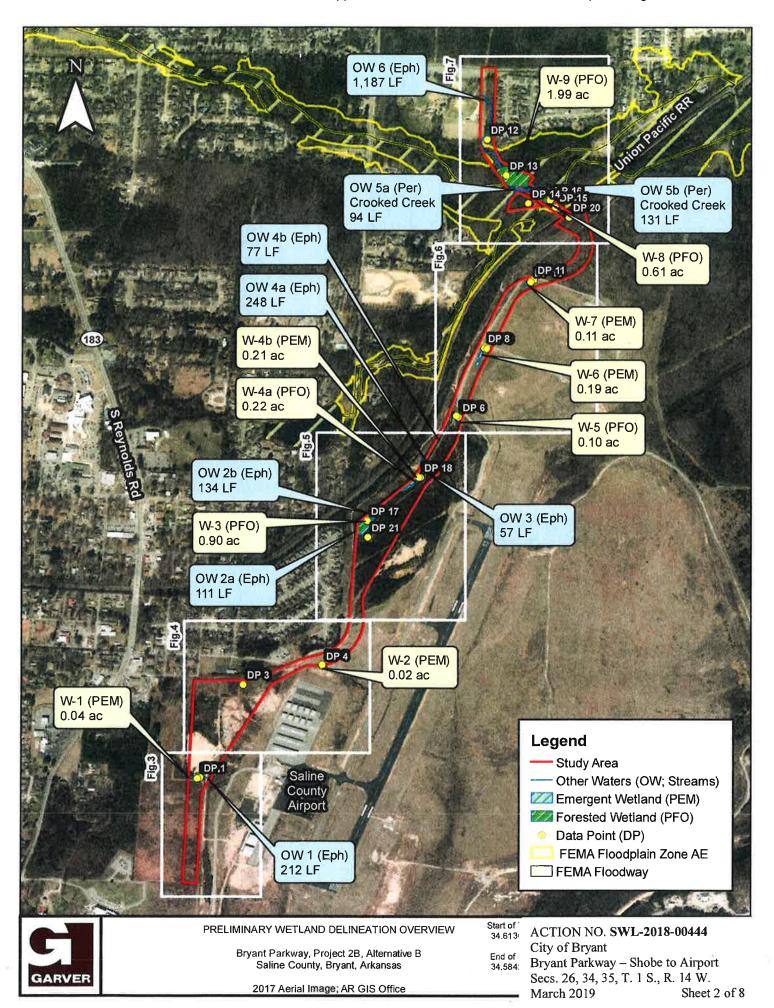
Signature and date of Regulatory Project Manager (REQUIRED)

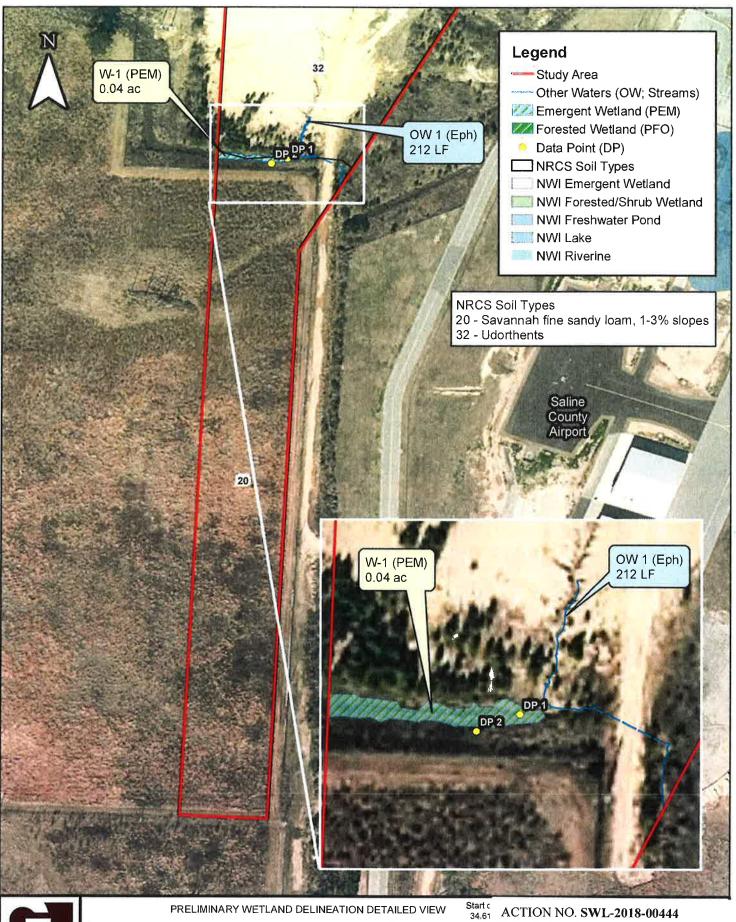
Signature and date of

person requesting preliminary JD (REQUIRED, unless obtaining the signature is impracticable)<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.







PRELIMINARY WETLAND DELINEATION DETAILED VIEW

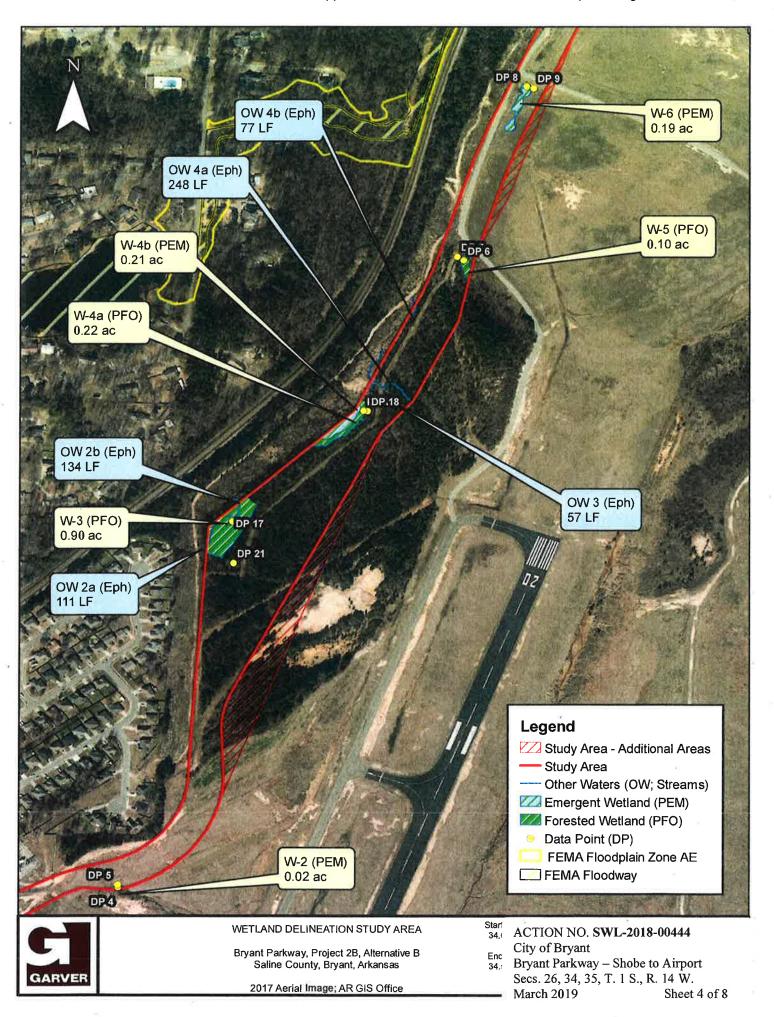
Bryant Parkway, Project 2B, Alternative B Saline County, Bryant, Arkansas

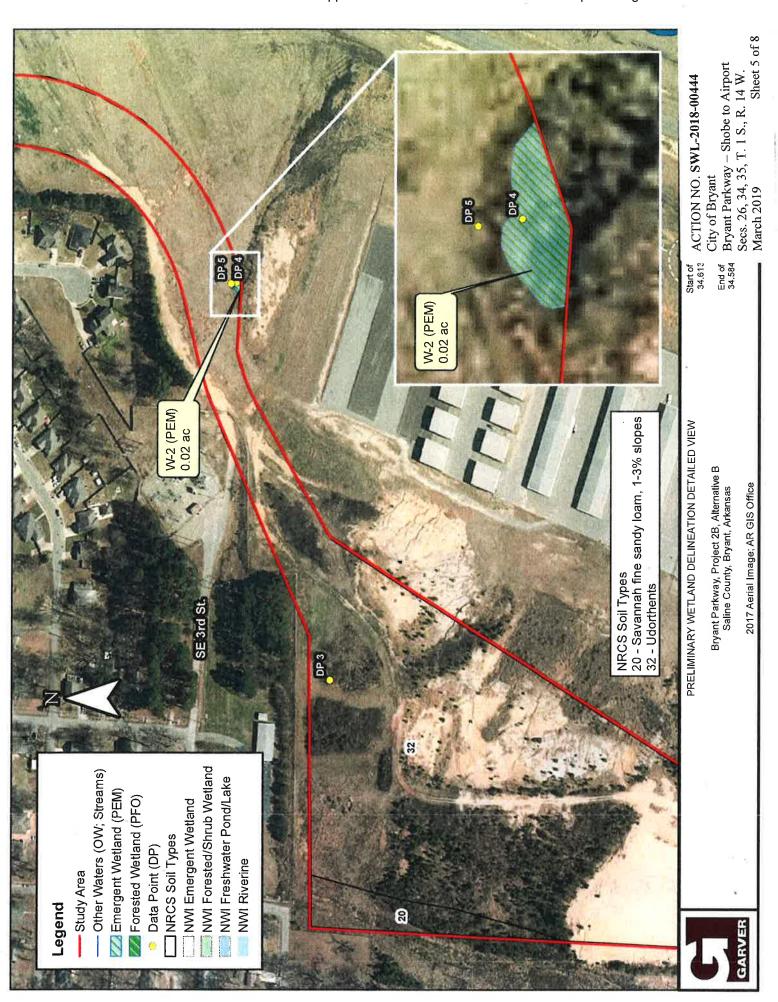
2017 Aerial Image; AR GIS Office

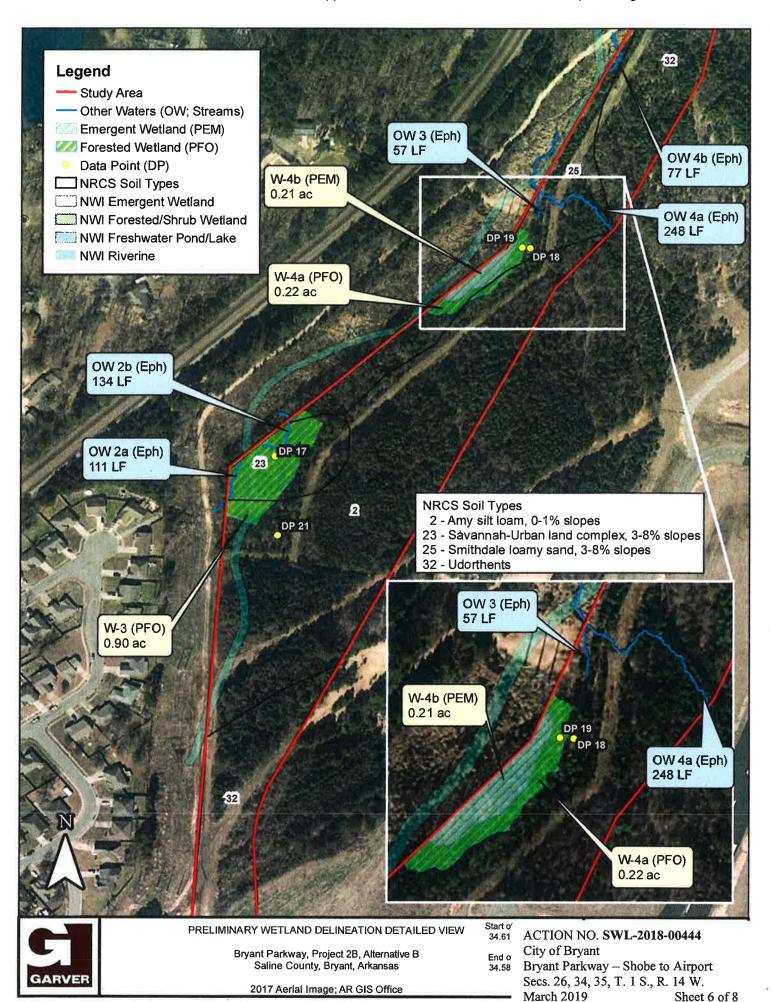
ACTION NO. SWL-2018-00444

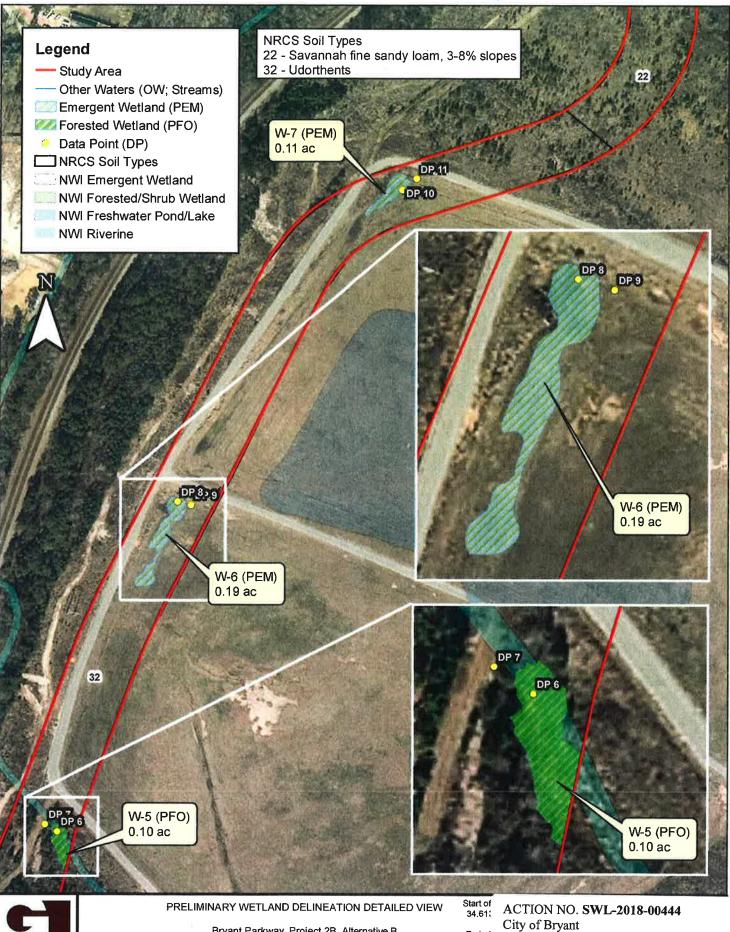
City of Bryant End (

Bryant Parkway – Shobe to Airport Secs. 26, 34, 35, T. 1 S., R. 14 W. March 2019 Sheet 3 of 8









GARVER

Bryant Parkway, Project 2B, Alternative B Saline County, Bryant, Arkansas

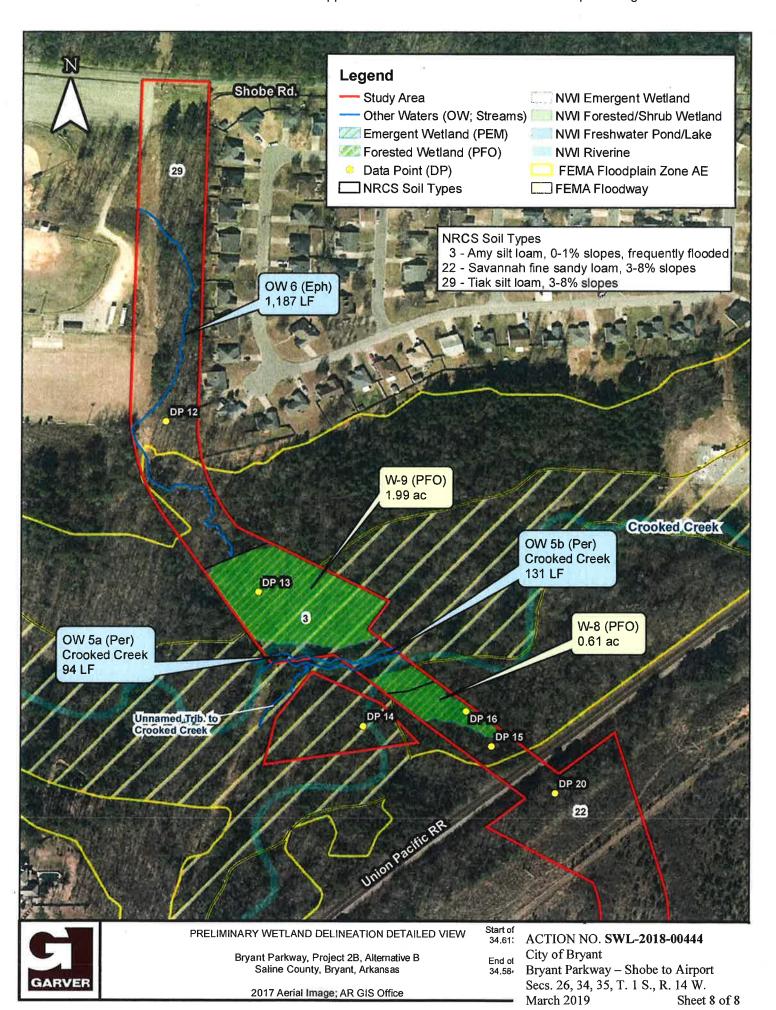
2017 Aerial Image; AR GIS Office

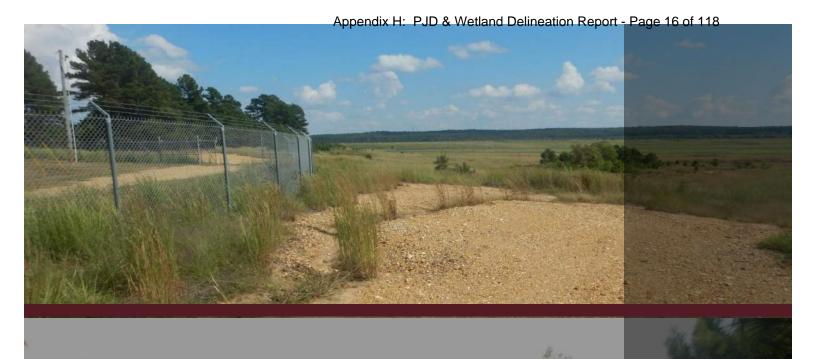
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Bryant Parkway - Shobe to Airport Secs. 26, 34, 35, T. 1 S., R. 14 W. March 2019

Sheet 7 of 8





# **Preliminary Wetland Delineation**

Bryant Parkway, Alternative B



Prepared For:

City of Bryant

November 2, 2018



### **Environmental Scientist's Certification**

I hereby certify that this Preliminary Wetland Delineation for the Bryant Parkway, Alternative B Project was prepared by Garver under my direct supervision for the City of Bryant.

Prepared by: Cassie Schmidt

Cassie Schmidt

**Environmental Scientist** 

Reviewed by: Dryan Mountain

Ryan Mountain, PWS

Senior Environmental Scientist



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### 1.0 Introduction

The City of Bryant (City) is proposing to extend Bryant Parkway from Hill Road east then north to Shobe Road in Bryant, Arkansas. The purpose of the project is to provide a south to north minor arterial on the eastern side of the City of Bryant in order to alleviate traffic and improve safety on Reynolds Road (Highway 183). Additionally, the project will improve safety by providing emergency vehicles with a grade separation over Union Pacific Railroad and Crooked Creek. The exact alignment of the new road has not yet been established, but any areas of potential disturbance are included in the Study Area shown in Appendix A. The City is assessing the environmental features present in the Study Area for evaluation of avoidance and minimization of potential wetland and stream impacts. As a result, the City of Bryant has retained Garver, LLC to develop documents and conduct a preliminary wetland delineation and an Environmental Assessment (EA).

# 1.1 Project Area

The proposed improvements are located in the Tertiary Uplands ecoregion (EPA Level IV Ecoregion) of Saline County, Arkansas. A large portion of the Study Area is located on property owned by the Saline County Regional Airport and much of the Study Area within airport property was previously mined. The general topography of the land varies from flat (for example near the south and north ends) to areas with steep hills. Elevations within the Study Area range from 348 to 423 feet National Geodetic Vertical Datum (NGVD). The Study Area is comprised of two distinct areas totaling approximately 61 acres. The Study Area includes Crooked Creek and unnamed tributaries, undeveloped fields and wooded areas, and maintained Airport grounds (refer to Appendix B – Preliminary Wetland Delineation Overview Map).

# 1.2 Regulatory Basis

Discharges of dredged or fill material into waters of the United States are regulated under Section 404 of the Clean Water Act. Any such action proposed in wetlands or other waters of the U.S. are subject to review by the U.S. Army Corps of Engineers (USACE) and other federal and state agencies and require authorization by USACE. For jurisdictional purposes, USACE



and the U.S. Environmental Protection Agency (EPA) jointly define wetlands as follows: *Those* areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (USACE 1987).

# 2.0 Methodology

A field investigation of the proposed project site was performed by Cassie Schmidt of Garver on October 4-5, 2018. The entire Study Area was visually inspected to locate areas of potentially-jurisdictional wetlands and waterways. An overview of the hydrology features mapped on the site is included in Appendix B. Detailed delineation exhibits are provided in Appendix C. Detailed information was collected at 21 locations to document the wetland and upland characteristics observed on the site. In addition to these 21 data points (DPs), as recorded in the data forms in this report, observation points were taken throughout the site. Wetland determinations were made using observable vegetation, hydrology, and soils in accordance with the routine approach described in the USACE Wetland Delineation Manual (1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0). Wetland data forms can be found in Appendix D.

The U.S. Fish and Wildlife Service (USFWS) in cooperation with Cowardin, et al. (1979), have identified a classification system that is widely accepted by the USACE and USFWS in relation to classifying wetland and stream habitats (i.e., Classification of Wetlands and Deepwater Habitats of the United States). Using the Cowardin system, USFWS provides preliminary wetland data for the U.S. through the National Wetlands Inventory (NWI). According to the NWI, there are four riverine wetlands within the Study Area (see Appendix C). Three of the four riverine wetlands identified by NWI are not present on the site in the location mapped by NWI. Wetlands and streams on the project site have been identified utilizing the methodology presented in this classification system. Garver also reviewed United States Geological Survey (USGS) topographic quadrangle maps for the presence of streams and other waterbodies. Tributary assessment locations are marked with an "OW" (Other Waters). Photographs of the



aquatic features present on the site were taken during the wetland delineation and are provided in Appendix E. The closest weather station with recorded data is Adams Field, located in Little Rock, Arkansas (approximately 33 miles northeast of Bryant). Precipitation data (Appendix F) for the area indicates approximately 3.7 inches of rainfall was received two weeks prior to the field investigation. During the delineation tributaries appeared to be flowing from the recent rain events.

#### 3.0 Results

#### 3.1 **Wetlands and Ponds**

Wetland 1 is classified as a PEM1H (Palustrine, Emergent, Permanent, Permanently Flooded Wetland) and is located west of OW 1 near the south end of the Study Area. Vegetation observed included blackeyed Susan (Rudbeckia hirta), broomsedge bluestem (Andropogon virginicus), common boneset (Eupatorium perfoliatum), common buttonbush (Cephalanthus occidentalis), common rush (Juncus effuses), velvet panicum (Dichanthelium scoparium), and woolgrass (Scirpus cyperinus). This area exhibited hydric soils (10YR 5/2 with redoximorphic features) and wetland hydrology. An estimated 0.04 acre of Wetland 1 is located within the Study Area. This feature is likely subject to regulation by the USACE due to its off-site hydrologic connection to an unnamed tributary to Hurricane Creek.

Wetland 2 is classified as PEM1E (Palustrine, Emergent, Permanent, Seasonally Flooded/Saturated Wetland) and is located on a small hillslope north of the Airport hangars. Vegetation observed included black willow (Salix nigra), sweetgum (Liquidambar styraciflua), broadleaf cattail (Typha latifolia), bushy bluestem (Andropogon glomeratus), common rush, and woolgrass. This area exhibited hydric soils (10YR 5/1 with redoximorphic features) and wetland hydrology. An estimated 0.02 acre of Wetland 2 is located within the Study Area. This feature is likely subject to regulation by the USACE due to its off-site hydrologic connection to an unnamed tributary to Hurricane Creek.

Wetland 3 is classified as PFO1C (Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded Wetland) and is located adjacent to OW 2. An ephemeral stream (OW 2) flows through this feature. Vegetation observed included American elm (*Ulmus americana*), black willow,



Chinese privet (*Ligustrum sinense*), loblolly pine (*Pinus taeda*), pignut hickory (*Carya glabra*), red maple (*Acer rubrum*), sweetgum, smartweed (*Persicaria* species), and roundleaf greenbrier (*Smilax rotundifolia*). This area exhibited hydric soils (10YR 4/2 with redoximorphic features) and wetland hydrology. An estimated 0.90 acre of Wetland 3 is located within the Study Area. This feature is likely subject to regulation by the USACE due to its off-site hydrologic connection with Crooked Creek.

Wetland 4a is classified as PFO1E (Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/Saturated Wetland) and Wetland 4b is classified as PEM1E (Palustrine, Emergent, Permanent, Seasonally Flooded/Saturated Wetland). These adjacent wetlands are located along the west edge of the Study Area. Vegetation observed within Wetland 4a included American elm, common buttonbush, loblolly pine, pignut hickory, sweetgum, red maple, and woolgrass. This area exhibited hydric soils (met by the hydrogen sulfide indicator) and wetland hydrology. An estimated 0.22 acre of Wetland 4a and 0.21 acre of Wetland 4b, which total 0.43 acre of Wetland 4, are located within the Study Area. This feature is likely subject to regulation by the USACE due to its off-site hydrologic connection with Crooked Creek.

**Wetland 5** is classified as PFO1C (Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded Wetland) and is located approximately 0.27 mile northwest of the north end of the runway. The NWI map shows a riverine wetland flowing through this location. Vegetation observed included black willow, brookside alder (*Alnus serrulata*), common buttonbush, loblolly pine, red maple, sweetgum, common rush, spike rush (*Eleocharis* species), and woolgrass. This area exhibited hydric soils (10YR 5/1 with redoximorphic features) and wetland hydrology. An estimated 0.10 acre of Wetland 5 is located within the Study Area. This feature is likely subject to regulation by the USACE due to its off-site hydrologic connection with Crooked Creek.

**Wetland 6** is classified as PEM1E (Palustrine, Emergent, Permanent, Seasonally Flooded/Saturated Wetland) and is located in a depression at the west edge of a field. A large vertical drain is present at the north end of this wetland and this drain presumably transfers excess water that accumulates here off-site. Vegetation observed included barnyardgrass (*Echinochloa crus-galli*), broadleaf cattail, flat sedge (*Cyperus* species), and switchgrass



(*Panicum virgatum*). This area exhibited hydric soils (met by the hydrogen sulfide indicator) and wetland hydrology. An estimated 0.19 acre of Wetland 6 is located within the Study Area. This feature is likely subject to regulation by the USACE due to its off-site hydrologic connection with Crooked Creek.

Wetland 7 is classified as PEM1E (Palustrine, Emergent, Permanent, Seasonally Flooded/Saturated Wetland) and is located in a depression at the north edge of a field. A large vertical drain is present at the west end of this wetland and this drain presumably transfers excess water that accumulates here off-site. Vegetation observed included black willow, broadleaf cattail, fowl mannagrass (*Glyceria striata*), primrose-willow (*Ludwigia* species), and woolgrass. This area exhibited hydric soils (met by the hydrogen sulfide and redox depression indicators) and wetland hydrology. An estimated 0.11 acre of Wetland 7 is located within the Study Area. This feature is likely subject to regulation by the USACE due to its off-site hydrologic connection with Crooked Creek.

**Wetland 8** is classified as PFO1A (Palustrine, Forested, Broad-Leaved Deciduous, Temporarily Flooded Wetland) and is located in a floodplain south of Crooked Creek. Wetland 8 hydrology appears to be maintained from storm events and overflow from Crooked Creek (OW 5). Vegetation observed included American elm, loblolly pine, sweetgum, water oak (*Quercus nigra*), and roundleaf greenbrier. This area exhibited hydric soils (10YR 4/2 and 5/2 with redoximorphic features) and wetland hydrology. An estimated 0.61 acre of Wetland 8 is located within the Study Area. This feature is likely subject to regulation by the USACE due to its hydrologic floodplain connection with Crooked Creek (OW 5).

**Wetland 9** is classified as PFO1A (Palustrine, Forested, Broad-Leaved Deciduous, Temporarily Flooded Wetland) and is located in a floodplain north of Crooked Creek. Wetland 9 hydrology appears to be maintained from storm events and overflow from Crooked Creek (OW 5). A maintained utility grass road (approximately 15 feet wide) is located south of Wetland 9 and separates the wetland from Crooked Creek, which is immediately south of the utility road. Vegetation observed included American elm, black willow, Chinese privet, green ash (*Fraxinus pennsylvanica*), pignut hickory, Shumard's oak (*Quercus shumardii*), sweetgum, smartweed,



and Virginia dayflower (*Commelina virginica*). This area exhibited hydric soils (10YR 4/2 and 5/2 with redoximorphic features) and wetland hydrology. An estimated 1.99 acres are located within the Study Area. This feature is likely subject to regulation by the USACE due to its hydrologic floodplain connection with Crooked Creek (OW 5).

# 3.2 Other Waters (OW)

**OW 1 – Unnamed Tributary to Hurricane Creek** is an ephemeral stream that originates in the Study Area, flows generally north to south, and then flows off-site where it eventually drains to Hurricane Creek. This feature is not mapped by the USGS. The ordinary high water mark (OHWM) associated with this feature was observed to be approximately 7 feet wide and 6 inches deep. Observed riparian zone vegetation included silktree (*Albizia julibrissin*), loblolly pine, sericea lespedeza (*Lespedeza cuneata*), Canada goldenrod (*Solidago altissima*), and blackeyed Susan. Approximately 212 linear feet of OW 1 occur within the Study Area.

**OW 2 – Unnamed Tributary to Crooked Creek** is an ephemeral stream that flows generally southwest to northeast through the Study Area. This feature is mapped by the USGS as a perennial stream (Crooked Creek), but was observed in the field as ephemeral (see description of OW 5 for details on USGS mapping). The OHWM associated with this feature was observed to be approximately 4 feet wide and 6 inches deep. OW 2a originates off-site, flows north-northeast into the Study Area, and then after 111 linear feet, all OHWMs dissipate. Evidence of OHWMs associated with the stream resume farther northeast and this stream (OW 2b) flows for an additional 134 linear feet before leaving the Study Area. Observed riparian zone vegetation included American elm, black willow, Chinese privet, loblolly pine, pignut hickory, red maple, sweetgum, smartweed, roundleaf greenbrier, and Japanese honeysuckle (*Lonicera japonica*). A total of approximately 245 linear feet of OW 2 occur within the Study Area.

**OW 3 – Unnamed Tributary to Crooked Creek** is an ephemeral stream that originates within the Study Area, flows north, and confluences at the west edge of the Study Area with OW 4. This feature is not a USGS-mapped stream. The OHWM associated with OW 3 was observed to be approximately 3 feet wide and 6 inches deep. Observed riparian zone vegetation included



loblolly pine, broomsedge bluestem, bushy bluestem, prickly lettuce (*Lactuca serriola*), roundleaf greenbrier, and switchgrass. Approximately 57 linear feet of OW 3 occur within the Study Area.

**OW 4 – Unnamed Tributary to Crooked Creek** is an ephemeral stream that flows generally southeast to northwest through the Study Area. A portion of this feature is mapped by the USGS as a perennial stream (Crooked Creek), but was observed in the field as ephemeral (see description of OW 5 for details on USGS mapping). The OHWM associated with this feature was observed to average approximately 3 feet wide and 6 inches deep. OW 4a originates off-site then flows west-northwest through the Study Area for 248 linear feet. Approximately 390 linear feet downstream from the point where OW 4a exits the Study Area, the stream re-enters the Study Area and flows northeast for an additional 77 linear feet before once again flowing off-site. Observed riparian zone vegetation included loblolly pine, red maple, broomsedge bluestem, bushy bluestem, Japanese honeysuckle, prickly lettuce, roundleaf greenbrier, and switchgrass. A total of approximately 325 linear feet of OW 4 occur within the Study Area.

**OW 5 – Crooked Creek** is a perennial stream that flows west to east through the Study Area. This feature is mapped by the USGS as a perennial stream and was confirmed as such during the field investigation. According to the USGS map, an unnamed tributary to Crooked Creek originates from the north/west while Crooked Creek originates from the south. The two streams confluence near the Study Area then Crooked Creek continues to flow east. However, based on the field investigation, the main channel of the creek originates from the north/west and the small intermittent stream that confluences with Crooked Creek from the south was identified as an unnamed tributary to Crooked Creek, not Crooked Creek itself. This small unnamed tributary to Crooked Creek did not pass through the Study Area (thus was not assigned an OW identifier). A maintained utility grass road (approximately 15 feet wide) is located parallel to the north bank of Crooked Creek and a sewer utility clearing/easement (approximately 30 feet wide) is located parallel to the south bank of Crooked Creek. In summary, this report has identified Crooked Creek (OW 5) as being the large primary channel flowing west to east through the Study Area. The OHWM associated with Crooked Creek was observed to be approximately 17-20 feet wide and 1.5-2.0 feet deep. Observed riparian zone vegetation included American elm, Chinese privet, loblolly pine, pignut hickory, sweetgum, water oak, white oak (Quercus alba), American



beautyberry (*Callicarpa americana*), eastern poison ivy (*Toxicodendron radicans*), Japanese honeysuckle, and roundleaf greenbrier. A total of approximately 225 linear feet of Crooked Creek occur within the Study Area.

**OW 6 – Unnamed tributary to Caney Creek** is an ephemeral stream that flows north to south through the north end of the Study Area and terminates near Wetland 9 when it loses OHWMS. This feature is not mapped by the USGS. The OHWM associated with OW 6 was observed to be approximately 3 feet wide and 6 inches deep. Observed riparian zone vegetation included eastern redcedar (*Juniperus virginiana*), pignut hickory, Shumard's oak, sweetgum, water oak, white oak, American beautyberry, eastern poison ivy, Japanese honeysuckle, roundleaf greenbrier, and slender woodoats (*Chasmanthium laxum*). Approximately 1,187 linear feet of OW 6 occur within the Study Area.

# 3.3 Summary

In summary, 9 wetlands (totaling 4.39 acres) and 6 streams (totaling 2,251 linear feet) were identified within the Study Area. This report is to be presented to the USACE for concurrence and determination of appropriate 404 permitting after impacts have been determined.

Table 1: Wetlands

Wetland	Cowardin Classification	Acreage Within the Study Area
Wetland 1	PEM1H	0.04
Wetland 2	PEM1E	0.02
Wetland 3	PFO1C	0.90
Wetland 4a	PFO1E	0.22
Wetland 4b	PEM1E	0.21
Wetland 5	PFO1C	0.10
Wetland 6	PEM1E	0.19
Wetland 7	PEM1E	0.11
Wetland 8	PFO1A	0.61
Wetland 9	PFO1A	1.99



**Table 2: Jurisdictional Waters** 

Hydrology Feature	Stream Classification	Ordinary High Water Mark (width x depth)	Linear Feet Within the Study Area
OW 1	Ephemeral	7 ft. x 6 inches	212
OW 2a	Ephemeral	4 ft. x 6 inches	111
OW 2b	Ephemeral	4 ft. x 6 inches	134
OW 3	Ephemeral	3 ft. x 6 inches	57
OW 4a	Ephemeral	3 ft. x 6 inches	248
OW 4b	Ephemeral	3 ft. x 6 inches	77
OW 5a (Crooked Creek)	Perennial	17-20 ft. x 1.5-2 ft.	94
OW 5b (Crooked Creek)	Perennial	17-20 ft. x 1.5-2 ft.	131
OW 6	Ephemeral	3 ft. x 6 inches	1,187

# 4.0 References

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Jamestown, ND: Northern Prairie Wildlife Research Center Online.

ESRI Basemaps Website. <a href="http://www.esri.com/data/basemaps">http://www.esri.com/data/basemaps</a>

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- U.S. Army Corps of Engineers. 1987. U.S. Army Corps of Engineers Wetland Delineation Manual. Technical Report Y-87-1. Vicksburg, Mississippi.



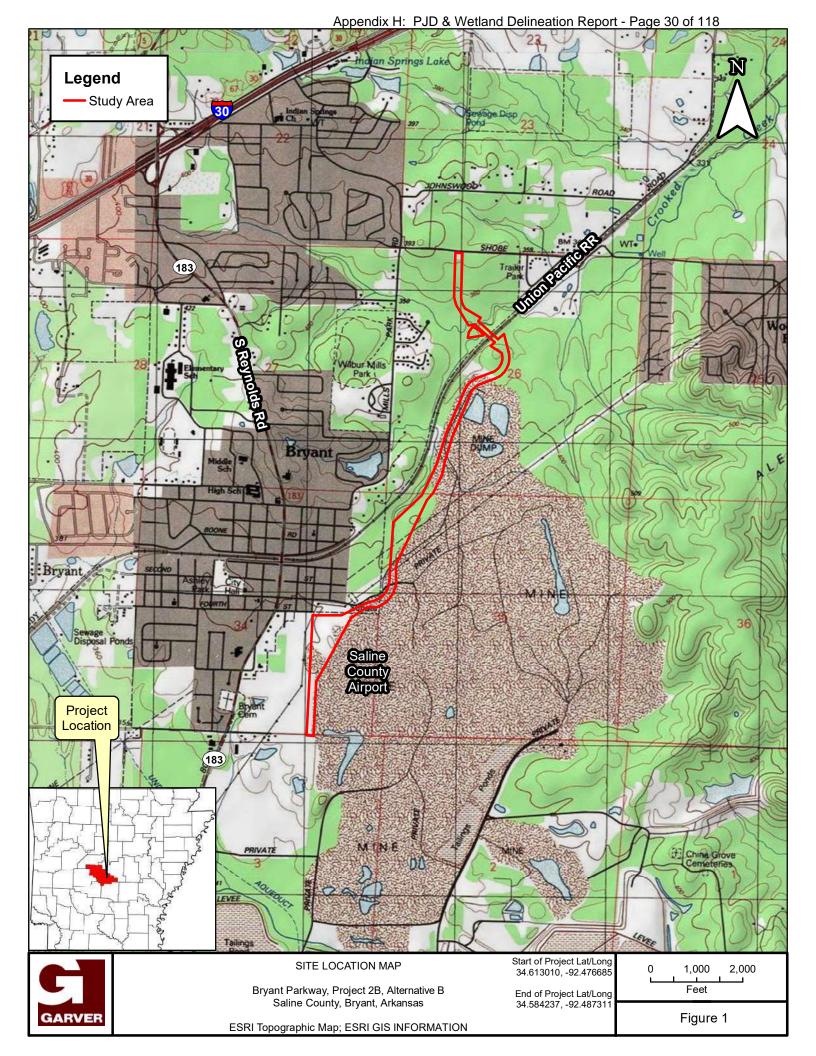
- U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0), ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-10-20. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- USDA, NRCS. 2017. The PLANTS Database (http://plants.usda.gov). National Plant Data Team, Greensboro, NC 27401-4901 USA.



# **APPENDIX A**

**Site Location Map** 





# **APPENDIX B**

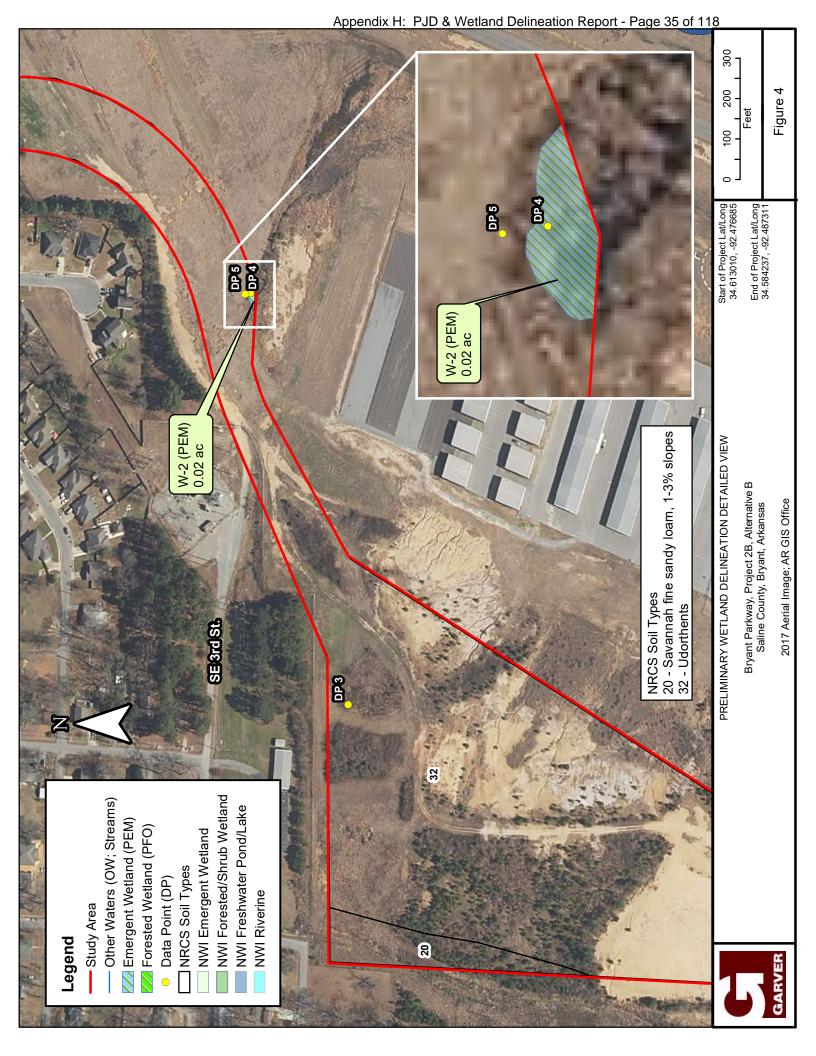
# Preliminary Wetland Delineation Overview

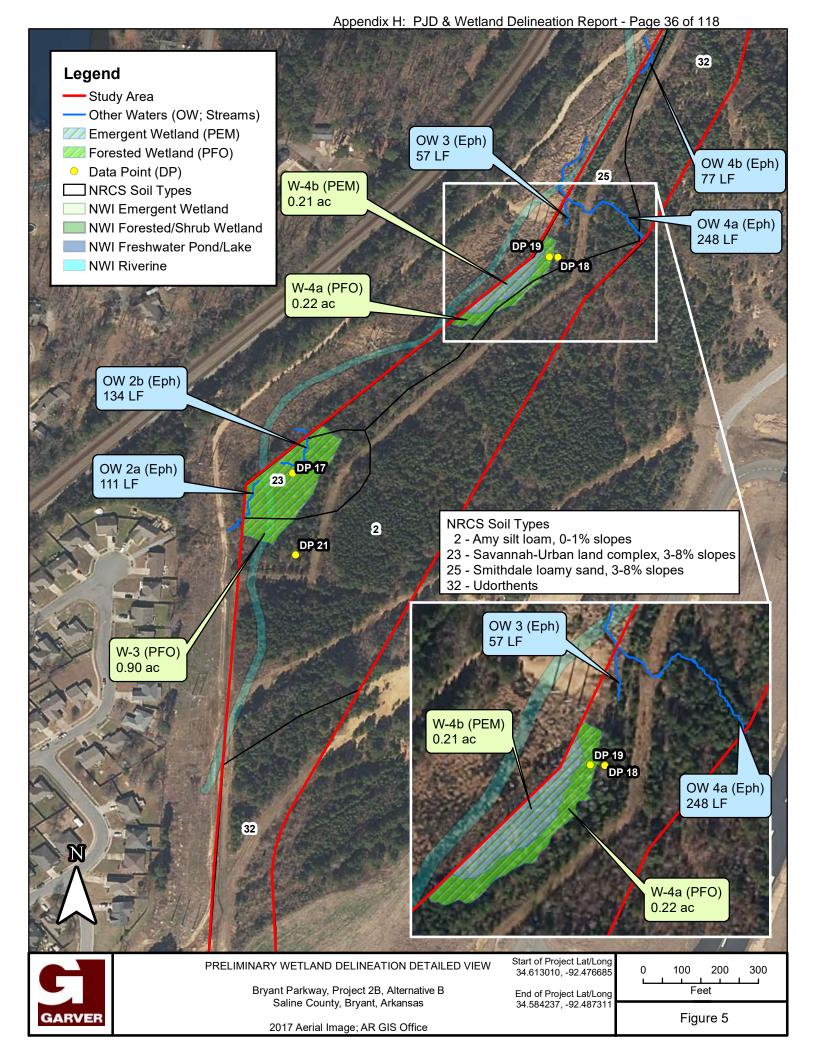


# **APPENDIX C**

# Preliminary Wetland Delineation Detailed Views







Bryant Parkway, Alternative B

# **APPENDIX D**

## **Data Forms**



Project/Site: Bryant Parkway Alternative B	City/County: Bryant / Saline	Sampling Date: 10/4/2018
Applicant/Owner: City of Bryant	State: AR	Sampling Point: DP 1
Investigator(s): Cassie Schmidt	Section, Township, Range: Sec 34, T 1S, R14W	
Landform (hillslope, terrace, etc.): linear drainage	Local relief (concave, convex, none): concave	Slope (%): 0
Subregion (LRR or MLRA): Lat: 34.587	978 Long: -92.486975	Datum: NAD83
Subregion (LRR or MLRA): Lat: 34.587  Soil Map Unit Name: 20 - Savannah fine sandy loam, 1-3% slopes	NWI classific	cation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year	ear? Yes <sup>X</sup> No (If no, explain in F	demarks.)
Are Vegetation, Soil, or Hydrology significantly		
Are Vegetation, Soil, or Hydrology naturally pro		
SUMMARY OF FINDINGS – Attach site map showing		
	<u>,                                      </u>	<u>, , , , , , , , , , , , , , , , , , , </u>
Hydrophytic Vegetation Present?  Yes X  No	Is the Sampled Area	
Hydric Soil Present?         Yes X         No           Wetland Hydrology Present?         Yes X         No	within a Wetland? Yes X	No
Remarks:		
Site meets all three wetland criteria.		
one mode an imos vonana emenar		
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil	Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1	3) Sparsely Ve	getated Concave Surface (B8)
High Water Table (A2)  Harl Deposits (B15)	_	tterns (B10)
Saturation (A3) Hydrogen Sulfide (		` ′
		Water Table (C2)
Sediment Deposits (B2)  Presence of Reduce Presence Pre		
		isible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4)       ☐ Thin Muck Surface         ☐ Iron Deposits (B5)       ☐ Other (Explain in F		Position (D2)
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral	` '
Water-Stained Leaves (B9)	<del>_</del>	noss (D8) <b>(LRR T, U)</b>
Field Observations:		,,,,,
Surface Water Present? Yes X No Depth (inches	): <u>0-1'</u>	
Water Table Present? Yes X No Depth (inches		
Saturation Present? Yes X No Depth (inches	): surface Wetland Hydrology Presei	nt? Yes X No
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photo	l os, previous inspections), if available:	
Remarks:		
Site meets wetland hydrology criteria.		
Appears to have originated as a man-made dr	•	
gradient (higher) as a result of sediment displa	cement from the nearby stream.	

## **VEGETATION (Four Strata)** – Use scientific names of plants.

<b>'EGETATION (Four Strata)</b> – Use scientific n	ames of pl	ants.		Sampling Point: DP 1
		Dominant		Dominance Test worksheet:
<u>Free Stratum</u> (Plot size:) I		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
None Observed				Total Number of Densinent
				Total Number of Dominant Species Across All Strata:   (B)
,				
,				Percent of Dominant Species That Are OBL, FACW, or FAC:  (A/B
i				That 7 to 0 2 2, 1 7 to 11, 51 1 7 to 1
·				Prevalence Index worksheet:
				Total % Cover of: Multiply by:
		= Total Cov		OBL species x 1 =
50% of total cover:	20% of	total cover	:	FACW species x 2 =
apling/Shrub Stratum (Plot size: 15' linear )				FAC species x 3 =
	15	Υ	OBL	FACU species x 4 =
				UPL species x 5 =
				Column Totals: (A) (B)
				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
				✓ 2 - Dominance Test is >50%
3.				2 - Dominance Test is >50%  3 - Prevalence Index is ≤3.0¹
	15	= Total Cov	/er	
50% of total cover: 7.5				Problematic Hydrophytic Vegetation¹ (Explain)
Herb Stratum (Plot size: 15' linear )	20 70 01	total cover		1
woolgrass, Scirpus cyperinus	50	Υ	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
common rush, Juncus effusus	10		OBL	Definitions of Four Vegetation Strata:
velvet panicum, Dichanthelium scoparium	20	<u>Y</u>	FACW	Sommione of Four Pogotation Ottata.
blackeyed Susan, Rudbeckia hirta	5	N	FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
common boneset, Eupatorium perfoliatum	5	N	FACW	height.
broomsedge bluestem, Andropogon virginicus	5	N	FAC	
<u> </u>				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
·				inan c in 22, and greater than cize it (1, tail
3. ]				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
				or size, and woody plants less than 5.20 it tall.
0				<b>Woody vine</b> – All woody vines greater than 3.28 ft in
1				height.
2		= Total Cov		
500/ -54-4-1 47.5				
50% of total cover: 47.5	20% 01	total cover		
Voody Vine Stratum (Plot size:)				
None Observed				
l				
l				
5				Hydrophytic
F00/ - 51-1	<u> </u>	= Total Cov		Vegetation   Present?   Yes X   No
50% of total cover:		total cover	·	
Remarks: (If observed, list morphological adaptations be	•			
Site meets hydrophytic vegetation crite	eria.			

	•	to the dep	th needed to docum			or confirm	the absence	of indicators.)
Depth (inches)	<u>Matrix</u> Color (moist)	<u></u> %	Color (moist)	<u>Feature</u> %	es Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-4	10 YR 4/4	90	7.5 YR 5/6	10	C	PL	TOXIGIO	sandy loam
4-18	10 YR 5/2	80	7.5 YR 5/6	20		PL&M		sandy clay loam
<del></del>								
					_			
<sup>1</sup> Type: C=Cc	oncentration, D=Dep	oletion, RM	=Reduced Matrix, MS	=Maske	d Sand Gr	ains.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applic	able to all	LRRs, unless other	wise not	ted.)		Indicators	for Problematic Hydric Soils <sup>3</sup> :
Histosol			Polyvalue Bel					Muck (A9) (LRR O)
Black His	ipedon (A2)		☐ Thin Dark Sui ☐ Loamy Mucky				1 1	Muck (A10) <b>(LRR S)</b> ed Vertic (F18) <b>(outside MLRA 150A</b> ,l
_	n Sulfide (A4)		Loamy Gleye			(0)		ont Floodplain Soils (F19) (LRR P, S, 7
	Layers (A5)		Depleted Mat		` ,			alous Bright Loamy Soils (F20)
=	Bodies (A6) (LRR F	· ·	Redox Dark S	`	,			RA 153B)
=	cky Mineral (A7) <b>(L</b> l esence (A8) <b>(LRR l</b>		☐ Depleted Dar					arent Material (TF2) Shallow Dark Surface (TF12)
_	ck (A9) <b>(LRR P, T)</b>	,	Marl (F10) (LI		0)			(Explain in Remarks)
=	l Below Dark Surfac	ce (A11)	Depleted Och		(MLRA 1	51)	<del></del>	,
=	rk Surface (A12)		Iron-Mangane			-	-	cators of hydrophytic vegetation and
=	airie Redox (A16) ( ucky Mineral (S1) (		A) Umbric Surfaction Delta Ochric (		-	-, U)		tland hydrology must be present, ess disturbed or problematic.
=	leyed Matrix (S4)	LIKIK O, S)	Reduced Veri		-	50A, 150B)		ess disturbed of problematic.
=	edox (S5)		Piedmont Flo		-	-		
= ::	Matrix (S6)		Anomalous B	right Loa	ımy Soils (	F20) <b>(MLR</b>	A 149A, 153C	, 153D)
	face (S7) (LRR P,						1	
Type:	.ayer (if observed)	•						
Depth (inc	hes).						Hydric Soil	Present? Yes X No
Domorko	, -						Tryuno con	
Si	te meets hyd	ric soil	criteria.					

Project/Site: Bryant Parkway Alternative B	City/County: Bryant / Saline	Sampling Date: 10/4/2018
Applicant/Owner: City of Bryant	State: AR	Sampling Point: DP 2
Investigator(s): Cassie Schmidt	Section, Township, Range: Sec 34, T 1S,	, R14W
Landform (hillslope, terrace, etc.): terrace		
Subregion (LRR or MLRA): Lat: 34.587	952 Long: -92.487065	Datum: NAD83
Subregion (LRR or MLRA): Lat: 34.587 Soil Map Unit Name: 20- Savannah fine sandy loam, 1-3% slopes	NWI c	classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of ye		
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumsta	nces" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain any	answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, trans	sects, important features, etc.
Harboria for Versatefor Processing		
Hydrophytic Vegetation Present?  Yes No X  Hydric Soil Present?  Yes No X	Is the Sampled Area	V
Hydric Soil Present?         Yes         No         x           Wetland Hydrology Present?         Yes         No         x	within a Wetland? Yes	s No <sup>X</sup>
Remarks:		
Site fails to meet all three wetland criteria.		
HYDROLOGY		
Wetland Hydrology Indicators:	<u>Secondar</u> ,	y Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surfac	ce Soil Cracks (B6)
Surface Water (A1)		ely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B1:		age Patterns (B10)
Saturation (A3)  Hydrogen Sulfide C  Oxidized Philosoph		Trim Lines (B16)
☐       Water Marks (B1)       ☐       Oxidized Rhizosph         ☐       Sediment Deposits (B2)       ☐       Presence of Reduction		eason Water Table (C2) ish Burrows (C8)
		ation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface	· · · —	norphic Position (D2)
Iron Deposits (B5)	Remarks) 🔲 Shallo	ow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	<del>_</del>	Neutral Test (D5)
Water-Stained Leaves (B9)	Sphag	gnum moss (D8) (LRR T, U)
Field Observations:  Surface Water Present?  Yes No _X Depth (inches	).	
Water Table Present? Yes No X Depth (inches		
Saturation Present?  Yes No _X Depth (inches		Present? Yes No X
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial phot		
Describe Recorded Data (stream gauge, monitoring well, aerial prior	os, previous inspections), ii available:	
Remarks:		
Site fails to meet wetland hydrology criteria.		

Sampling Point: DP 2

#### **VEGETATION** (Four Strata) – Use scientific names of plants.

200 radius		Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30' radius )  1. loblolly pine, Pinus taeda		Species?	Status FAC	Number of Dominant Species
	20			That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: 6 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 33 (A/B)
6	· ——			Prevalence Index worksheet:
7				
8				
		= Total Cov		1
50% of total cover: 10	20% of	total cover	:	FACW species x 2 =
Sapling/Shrub Stratum (Plot size:)				FAC species x 3 =
1				FACU species x 4 =
2. None Observed				UPL species x 5 =
3				Column Totals: (A) (B)
4				Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
6	. <u> </u>			1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
8.				☐ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
		= Total Cov	·er	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover:				Problematic Hydrophytic Vegetation (Explain)
Herb Stratum (Plot size: 5' radius )				1 Indicators of hydric cail and watland hydrology, much
1. sericea lespedeza, Lespedeza cuneata	15	Υ	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. Canada goldenrod, Solidago altissima	10	Y	FACU	Definitions of Four Vegetation Strata:
3.				
4.				<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
5.				height.
6.				Sapling/Shrub – Woody plants, excluding vines, less
7.				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8.				
9.				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
10.				
11.				<b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
12.				neight.
12.	25	= Total Cov		
50% of total cover: 12.5		total cover		
Woody Vine Stratum (Plot size: 30' radius )	20 % 01	total cover		
1 blackberry, Rubus sp.*	40	Υ	FACU	
2. roundleaf greenbrier, Smilax rotundifolia	20	<u>Y</u>	FAC	
Japanese honeysuckle, Lonicera japonica	20	<u>Y</u>	FACU	
		<u>.</u>		
4				
5	80			Hydrophytic
<b>-</b> 001 - 11 - 10 - 10 - 10 - 10 - 10 - 10		= Total Cov		Vegetation   Present?   Yes No _X
<del></del>	20% of	total cover	:	
Remarks: (If observed, list morphological adaptations belo	ow).			

Site fails to meet hydrophytic vegetation criteria.

Of the 11 species of Rubus listed in Arkansas for the AGCP Region, the majority (55%) are FACU or UPL.

		to the dep	th needed to docum			or confirm	the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	<u></u> %	Color (moist)	<u>k Feature</u> %	s Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8	10 YR 4/3	80	7.5 YR 5/6	10	C	M	TOXIGIO	clay loam, extremely rocky
					·			
		<del>-</del>			·	·		
¹Type: C=Co	ncentration, D=Dep	oletion, RM	=Reduced Matrix, MS	=Maske	d Sand Gr	ains.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applic	able to all	LRRs, unless other	wise not	ed.)		Indicators	for Problematic Hydric Soils <sup>3</sup> :
Histosol			Polyvalue Be					Muck (A9) <b>(LRR O)</b>
=	ipedon (A2)		Thin Dark Su				1 1	Muck (A10) <b>(LRR S)</b>
Black His			Loamy Mucky			R O)		ed Vertic (F18) (outside MLRA 150A,E
= ' '	n Sulfide (A4) Layers (A5)		Loamy Gleye Depleted Mat		(FZ)			ont Floodplain Soils (F19) <b>(LRR P, S, T</b> alous Bright Loamy Soils (F20)
=	Bodies (A6) <b>(LRR F</b>	P. T. U)	Redox Dark S	. ,	<del>-</del> 6)			RA 153B)
=	cky Mineraĺ (A7) <b>(L</b>		Depleted Dar	k Surface	· (F7)			arent Material (TF2)
Muck Pro	esence (A8) <b>(LRR l</b>	J)	Redox Depre	ssions (F	(8)			Shallow Dark Surface (TF12)
	ck (A9) (LRR P, T)	(4.4.4)	☐ Marl (F10) <b>(L</b>			>	U Other	(Explain in Remarks)
	Below Dark Surfacturiacy Below Dark Surface (A12)	e (A11)	☐ Depleted Och☐ Iron-Mangane		-	-	T) <sup>3</sup> India	cators of hydrophytic vegetation and
=	airie Redox (A16) <b>(</b>	MLRA 150	=			=	-	tland hydrology must be present,
=	ucky Mineral (S1) (		Delta Ochric	. ,	•	, -,		ess disturbed or problematic.
=	leyed Matrix (S4)		Reduced Ver			50A, 150B)		
	edox (S5)		Piedmont Flo					
=	Matrix (S6)			right Loa	my Soils (	(F20) <b>(MLR</b>	A 149A, 153C	, 153D)
	face (S7) (LRR P, s .ayer (if observed)						1	
Type: too	ocky (old stream bed?)	•						
Depth (inc			<u></u>				Hydric Soil	Present? Yes No X
Pomarks:	•						Tiyano con	1103cm: 103 NO
Si	te fails to me	et hydri	c soil criteria.					

Project/Site: Bryant Parkway Alternative B	City/County: Bryant / Saline	Sampling Date: 10/4/2018
Applicant/Owner: City of Bryant	State: AR	Sampling Point: DP 3
Investigator(s): Cassie Schmidt	Section, Township, Range: Sec 34, T 1S,	
Landform (hillslope, terrace, etc.). partially wooded patch in field	Local relief (concave, convex, none). none	Slone (%): 2
Subregion (LRR or MLRA): Lat: 34.591	274 Long: -92.485439	Datum: NAD83
Soil Map Unit Name: 32 - Udorthents	NWI cla	assification: N/A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No ( <b>I</b> f no, explai	in in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstan	nces" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain any a	answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, trans	sects, important features, etc.
Hydrophytic Vegetation Present?  Yes No _x		
		<b>Y</b>
Hydric Soil Present?         Yes	within a Wetland? Yes	No X
Remarks:		
Site fails to meet all three wetland criteria.		
Data point collected within lowest point within	the wooded area.	
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary	Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface	e Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1		ely Vegetated Concave Surface (B8)
High Water Table (A2)  Harl Deposits (B1:		ge Patterns (B10)
Saturation (A3)		Frim Lines (B16)
☐       Water Marks (B1)       ☐       Oxidized Rhizosph         ☐       Sediment Deposits (B2)       ☐       Presence of Reduction		eason Water Table (C2) sh Burrows (C8)
		tion Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface		orphic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in F	Remarks)	w Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	<del>=</del>	eutral Test (D5)
☐ Water-Stained Leaves (B9)	<u> </u>	num moss (D8) <b>(LRR T, U)</b>
Field Observations:	,	
Surface Water Present?  Yes No _X Depth (inches Water Table Present?  Yes No _X Depth (inches No _X		
Water Table Present?  Yes No _X Depth (inches Saturation Present?  Yes No _X Depth (inches Saturation Present?		Present? Yes No X
(includes capillary fringe)		resent: res No
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if available:	
Remarks:		
Site fails to meet wetland hydrology criteria.		
,		

Sampling Point: DP 3

#### **VEGETATION** (Four Strata) – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30' radius )  1. black willow, Salix nigra	% Cover	Species?	Status OBL	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
2				Total Number of Dominant
3				Species Across All Strata: 8 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC:  (A/B)
6				(VI)
7.				Prevalence Index worksheet:
8.				Total % Cover of: Multiply by:
	80	= Total Co	ver	OBL species x 1 =
50% of total cover: 40				FACW species x 2 =
Sapling/Shrub Stratum (Plot size:)				FAC species x 3 =
1.				FACU species x 4 =
o None Observed				UPL species x 5 =
3.				Column Totals: (A) (B)
4				
_				Prevalence Index = B/A =
			•	Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
8				3 - Prevalence Index is ≤3.0 <sup>1</sup>
		= Total Cov		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover:	20% of	total cover	:	
Herb Stratum (Plot size: 5' radius )	10	Υ	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
sericea lespedeza, Lespedeza cuneata		<u>'</u>		be present, unless disturbed or problematic.
2. Canada goldenrod, Solidago altissima	10		FACU	Definitions of Four Vegetation Strata:
3. blackberry, Rubus sp.*	_ 10	Y	FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
4. green bulrush, Scirpus atrovirens	_ 10	Y	OBL	more in diameter at breast height (DBH), regardless of
5. woolgrass, Scirpus cyperinus	10	Y	OBL	height.
6. Japanese honeysuckle, Lonicera japonica	_ 10	<u>Y</u>	FACU	Sapling/Shrub – Woody plants, excluding vines, less
7. common boneset, Eupatorium perfoliatum		<u>Y</u>	FACW	than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8				<b>Herb</b> – All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10				Woody vine – All woody vines greater than 3.28 ft in
11				height.
12.				
	70	= Total Co	ver	
50% of total cover: 35	20% of	total cover	: 14	
Woody Vine Stratum (Plot size:)				
1				
2. None Observed				
3.				
4.				
5.				Hudronbutio
		= Total Cov	ver	Hydrophytic Vegetation
50% of total cover:				Present? Yes No X
Remarks: (If observed, list morphological adaptations bel		JULIA COVE		
riomania. (ii obaci veu, nai morphological adaptations bel	OW).			

Site fails to meet hydrophytic vegetation criteria.

Of the 11 species of Rubus listed in Arkansas for the AGCP Region, the majority (55%) are FACU or UPL.

		to the dep	oth needed to docum			or confirm	the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Redox Color (moist)	<u>k Feature</u> %	s Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-6	7.5 YR 4/6	80	<u>Color (moisty</u>		Турс		TOXIGIO	clay loam; mixed soils
	7.5 YR 4/3	20						
6-12	7.5 YR 3/2	80		-				clay loam; mixed soils
	7.5 YR 4/6	20						olay loam, mixed done
40.40		<del></del>	7.5.VD.5/0					-lauta an
12-18	7.5 YR 4/1		7.5 YR 5/8	20	<u>C</u>	<u>M</u>		clay loam
	_							
			=Reduced Matrix, MS			ains.		PL=Pore Lining, M=Matrix.
		cable to all	LRRs, unless other		=			s for Problematic Hydric Soils <sup>3</sup> :
Histosol			Polyvalue Bel					Muck (A9) (LRR O)
	oipedon (A2)		Thin Dark Sui					Muck (A10) (LRR S)
Black His	n Sulfide (A4)		Loamy Mucky Loamy Gleye			(0)		ced Vertic (F18) <b>(outside MLRA 150A,B)</b> nont Floodplain Soils (F19) <b>(LRR P, S, T)</b>
=	Layers (A5)		Depleted Mat		(1 2)			alous Bright Loamy Soils (F20)
=	Bodies (A6) (LRR F	P, T, U)	Redox Dark S	Surface (F	<del>-</del> 6)			RA 153B)
	cky Mineral (A7) <b>(L</b>		) Depleted Dar	k Surface	e (F7)			arent Material (TF2)
=	esence (A8) (LRR l	J)	Redox Depre		8)			Shallow Dark Surface (TF12)
=	ck (A9) (LRR P, T)	o (A11)	Marl (F10) (LI		/MI DA 1	E4\	U Other	(Explain in Remarks)
	l Below Dark Surfad Irk Surface (A12)	æ (ATT)	☐ Depleted Och☐ Iron-Mangane		-	-	T) <sup>3</sup> Indic	cators of hydrophytic vegetation and
=	airie Redox (A16) <b>(</b>	MLRA 150	=					tland hydrology must be present,
=	lucky Mineral (S1) (		Delta Ochric (	(F17) <b>(ML</b>	RA 151)	•		less disturbed or problematic.
=	leyed Matrix (S4)		Reduced Verl			-		
	edox (S5)		Piedmont Flo					. 450B)
= ::	Matrix (S6) face (S7) <b>(LRR P,</b> 3	S T II)		right Loai	my Soils (	F20) <b>(MLR</b>	A 149A, 153C	;, 153D)
	_ayer (if observed)							
Type:	,							
Depth (inc	ches):						Hydric Soil	Present? Yes No X
Remarks:								
Si	te talls to me	et nyar	ic soil criteria.					

Project/Site: Bryant Parkway Alternative B		City/C	ounty: Bryar	nt / Saline		Sampling Date	e: 10/4/2018
Applicant/Owner: City of Bryant		<u> </u>		Sta	ate: AR	Sampling Poin	t: DP 4
Investigator(s): Cassie Schmidt		Section					
Landform (hillslone, terrace, etc.). emergen	t wetland	Local	relief (concar	ve convey no	none	SI	ope (%): 1
Subregion (LRR or MLRA):		Lat: 34.591940	<u> </u>	Long: <u>-92</u>	482648		Datum: NAD83
Soil Map Unit Name: 32 - Udorthents		<del></del>		 	NWI classific	ation: N/A	
Are climatic / hydrologic conditions on the si	te typical for	this time of year? Y					
Are Vegetation, Soil, or Hyd							X No
Are Vegetation, Soil, or Hyd					olain any answe		
SUMMARY OF FINDINGS – Attac							
		<u> </u>	• •		·	<u> </u>	
Hydrophytic Vegetation Present? Hydric Soil Present?	∕es <u>^</u> ∨es X	No	Is the Sam	-	V		
Wetland Hydrology Present?	Yes_ <u>X</u>	No	within a W	etland?	Yes <u>^</u>	No	
Remarks:							
Site meets all three wetland	criteria.						
HYDROLOGY							
Wetland Hydrology Indicators:				s	econdary Indica	itors (minimum	of two required)
Primary Indicators (minimum of one is requ	uired: check	all that apply)		Τ̈́	Surface Soil	•	or two roganoa,
Surface Water (A1)		atic Fauna (B13)		<u> </u>	7	getated Concav	e Surface (B8)
High Water Table (A2)		Deposits (B15) (LRF	R U)	Ī	Drainage Pa	•	o o aasz (= -,
Saturation (A3)		rogen Sulfide Odor (C	-	Ī	Moss Trim Li		
Water Marks (B1)		lized Rhizospheres al		Roots (C3)	_	Water Table (C	2)
Sediment Deposits (B2)	Pres	ence of Reduced Iron	n (C4)	<u>_</u>	Crayfish Buri	rows (C8)	
Drift Deposits (B3)	∐ Rece	ent Iron Reduction in	Tilled Soils (	C6) <u>L</u>	Saturation Vi	sible on Aerial I	lmagery (C9)
Algal Mat or Crust (B4)		Muck Surface (C7)		Ē	= '	Position (D2)	
Iron Deposits (B5)		er (Explain in Remark	s)	Ē	Shallow Aqui	` '	
Inundation Visible on Aerial Imagery (	B7)			<u>L</u>	☑ FAC-Neutral		
Water-Stained Leaves (B9)				<u>L</u>	_l Sphagnum n	noss (D8) <b>(LRR</b>	T, U)
Field Observations:  Surface Water Present?  Yes X	No	Depth (inches): 0-2"					
		Depth (inches): 4"					
		Depth (inches): surfa	ice	Wetland Hv	drology Presen	it? Yes <sup>X</sup>	No
(includes capillary fringe)				_			<u> </u>
Describe Recorded Data (stream gauge, r	nonitoring we	आ, aerial photos, pre	vious inspect	lions), if availa	ble:		
Remarks:							
Site meets wetland hydrolog	y criteria	l.					
, -	•						
Hydrology appears to be ma	intained	by hillside see	ep active	ly supplyi	ng water.		
		•	•		•		

## **VEGETATION (Four Strata)** – Use scientific names of plants.

	ames of pl	unto.		Sampling Point: DP 4
20' radius		Dominant		Dominance Test worksheet:
<u>ree Stratum</u> (Plot size: 30' radius ) black willow, Salix nigra	<u>% Cover</u> 10	Species?	Status OBL	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
·	_			Total Number of Dominant
				Species Across All Strata: $\frac{3}{}$ (B)
				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100 (A/B
S				
· ·				Prevalence Index worksheet:
h				
_		= Total Cov		FACW species x 2 =
50% of total cover: 5	20% of	total cover	2	FAC species x 3 =
<u>sapling/Shrub Stratum</u> (Plot size: 15' radius )	40	V	F40	FACU species x 4 =
sweetgum, Liquidambar styraciflua		<u>Y</u>	FAC	UPL species x 5 =
				Column Totals: (A) (B)
				(b)
				Prevalence Index = B/A =
i				Hydrophytic Vegetation Indicators:
)				1 - Rapid Test for Hydrophytic Vegetation
·				2 - Dominance Test is >50%
3	10			☐ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
500/ -54-4-1 5		= Total Cov		☐ Problematic Hydrophytic Vegetation¹ (Explain)
50% of total cover: 5	20% 01	total cover		
Herb Stratum (Plot size: 5' radius ) woolgrass, Scirpus cyperinus	50	Υ	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
common rush, Juncus effusus	10		OBL	Definitions of Four Vegetation Strata:
bushy bluestem, Andropogon glomeratus	10		FACW	Definitions of Four Vegetation Strata.
broadleaf cattail, Typha latifolia	10		OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) o
5.				more in diameter at breast height (DBH), regardless of height.
				Continual Mandaulanta analysisa a land
				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
3.				
 ).				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
0				
1.				<b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
2.				no.g.u
		= Total Cov	er	
50% of total cover: 40				
Voody Vine Stratum (Plot size:)				
Voody Vine Stratum (Plot size:)				
Voody Vine Stratum (Plot size:)  . None Observed				
Noody Vine Stratum (Plot size:)  . None Observed 3.				
Noody Vine Stratum (Plot size:)  None Observed  No				
Noody Vine Stratum (Plot size:)  None Observed				Hydrophytic Vogetation
Noody Vine Stratum (Plot size:)  None Observed  No		= Total Cov	er	Hydrophytic Vegetation Present? Yes <sup>X</sup> No

nches)	Color (moist)	%	Color (moist)	ox Feature: %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
18	10 YR 5/1	60	7.5 YR 5/8	<del>%</del> 20	<u>Type</u> C	M&PL	<u>rexture</u>	sandy clay loam
			7.5 111 5/6			- IVIXI L		
	Gley 1 7/10Y				-			clay
								-
ype: C=Co	oncentration, D=De	pletion, RM	=Reduced Matrix, M	S=Masked	l Sand Gr	ains.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
dric Soil	Indicators: (Appli	cable to all	LRRs, unless othe	rwise not	ed.)		Indicators	for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Polyvalue B	elow Surfa	ce (S8) <b>(L</b>	.RR S, T, U	) <u> </u>	/luck (A9) <b>(LRR O)</b>
] Histic Ep	oipedon (A2)		Thin Dark S					/luck (A10) <b>(LRR S)</b>
=	stic (A3)		Loamy Muck			R O)		ed Vertic (F18) (outside MLRA 150A
• •	en Sulfide (A4)		Loamy Gley	-	F2)			ont Floodplain Soils (F19) <b>(LRR P, S</b>
	d Layers (A5)		Depleted Ma	. ,	-0)			alous Bright Loamy Soils (F20)
= -	Bodies (A6) (LRR		Redox Dark		,		1 1 1	RA 153B)
•	icky Mineral (A7) <b>(I</b> esence (A8) <b>(LRR</b>		Depleted Da					arent Material (TF2) Shallow Dark Surface (TF12)
i	ick (A9) (LRR P, T)		Marl (F10) (I	,	0)			(Explain in Remarks)
	d Below Dark Surfa		Depleted Oc		(MLRA 1	51)		(Explain in Nemarks)
	ark Surface (A12)	00 (/ 1. 1)	Iron-Mangar	, ,	•	•	T) <sup>3</sup> Indic	cators of hydrophytic vegetation and
:	rairie Redox (A16)	(MLRA 150	=				-	land hydrology must be present,
•	lucky Mineral (S1)	-	Delta Ochric	(F17) <b>(ML</b>	RA 151)	. ,		ess disturbed or problematic.
] Sandy G	Gleyed Matrix (S4)		Reduced Ve					
] Sandy R	Redox (S5)		Piedmont Fl	oodplain S	oils (F19)	(MLRA 14	9 <b>A</b> )	
	Matrix (S6)		Anomalous I	Bright Loar	my Soils (	F20) <b>(MLR</b>	A 149A, 153C	, 153D)
	rface (S7) (LRR P,						1	
	Layer (if observed	):						
_								
Туре:								Y
Type: Depth (inc	ches):						Hydric Soil	Present? Yes X No
Type: Depth (inc	ches):	dric soil	  criteria				Hydric Soil	Present? Yes X No
Type: Depth (inc		dric soil	criteria.				Hydric Soil	Present? Yes X No
Type: Depth (inc	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type: Depth (inc	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type: Depth (inc	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type: Depth (inc	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type: Depth (ind	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type: Depth (ind	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type: Depth (ind	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type: Depth (ind	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type: Depth (ind	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type: Depth (ind	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type: Depth (ind	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type: Depth (inc	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type: Depth (inc	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type: Depth (inc	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type:	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type:	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type:	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type:	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type: Depth (inc	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type: Depth (ind	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No
Type: Depth (ind	ches):	dric soil	criteria.				Hydric Soil	Present? Yes X No

Project/Site: Bryant Parkway Alternative B	City/County: Bryant / Saline	Sampling Date: 10/4/2018
Applicant/Owner: City of Bryant	State: A	NR Sampling Point: DP 5
Investigator(s): Cassie Schmidt	Section, Township, Range: Sec 34, T	
Landform (hillslope, terrace, etc.): hillslope		
Subregion (LRR or MLRA): Lat: 34.59	974 Long: <u>-92.48265</u>	Datum: NAD83
Soil Map Unit Name: 32 - Udorthents	NV	VI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of y		
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circum	stances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain a	any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	ງ sampling point locations, tra	ansects, important features, etc.
Lhidrahidia Variation Process Var		
Hydrophytic Vegetation Present?  Yes No X  Hydric Soil Present?  Yes No X	Is the Sampled Area	<b>v</b>
Hydric Soil Present?         Yes	within a Wetland?	Yes No _X
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)		dary Indicators (minimum of two required)
Surface Water (A1)  Aquatic Fauna (B:		rface Soil Cracks (B6) arsely Vegetated Concave Surface (B8)
High Water Table (A2)  High Water Table (A2)  Marl Deposits (B1)		ainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide	_	oss Trim Lines (B16)
		y-Season Water Table (C2)
Sediment Deposits (B2) Presence of Redu	ced Iron (C4)	ayfish Burrows (C8)
	` ' =	turation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)  Thin Muck Surface	· · · · <del>-</del>	comorphic Position (D2)
Iron Deposits (B5) Uther (Explain in I Inundation Visible on Aerial Imagery (B7)	<b></b>	allow Aquitard (D3) C-Neutral Test (D5)
Water-Stained Leaves (B9)	<del>_</del>	hagnum moss (D8) (LRR T, U)
Field Observations:		
Surface Water Present? Yes No X Depth (inches		
Water Table Present? Yes No X Depth (inches		v
Saturation Present? Yes No X Depth (inchest (includes capillary fringe)	i): >18" Wetland Hydrolog	gy Present? Yes No X
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if available:	
Remarks:		
Site fails to meet wetland hydrology criteria.		
The falls to most welland hydrology emenal		

Sampling Point: DP 5

## **VEGETATION (Four Strata)** – Use scientific names of plants.

		Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:) 1	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2. None Observed 3				Total Number of Dominant Species Across All Strata:   (B)
4.				Openies / Noross / Nil Ottata.
5				Percent of Dominant Species That Are OBL, FACW, or FAC:  0 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
8				OBL species x 1 =
				FACW species x 2 =
50% of total cover:	20% of	total cover	:	FAC species x 3 =
Sapling/Shrub Stratum (Plot size:)				FACU species x 4 =
1.				UPL species x 5 =
2. None Observed				Column Totals: (A) (B)
3				Column rotals (A) (B)
4				Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
8				3 - Prevalence Index is ≤3.0 <sup>1</sup>
	:	= Total Co	ver	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover:	20% of	total cover	:	
Herb Stratum (Plot size: 5' radius )				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1. sericea lespedeza, Lespedeza cuneata	30	Υ	FACU	be present, unless disturbed or problematic.
2. dallisgrass, Paspalum dilatatum	10	N	FAC	Definitions of Four Vegetation Strata:
3. bahiagrass, Paspalum notatum	30	Y	FACU	Tree Meady plants evaluding vines 2 in (7.6 cm) or
4. bushy bluestem, Andropogon glomeratus	10	N	FACW	<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
5				height.
6.				Sapling/Shrub – Woody plants, excluding vines, less
7.				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8.				Herb – All herbaceous (non-woody) plants, regardless
9.				of size, and woody plants less than 3.28 ft tall.
10.				
11.				<b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
12.				noight.
	80	= Total Co		
50% of total cover: 40				
Woody Vine Stratum (Plot size:)	2070 01	total cover		
1.				
2 None Observed				
34.				
5				Hydrophytic Vegetation
F00/ -ft-t-l		= Total Co		Present? Yes No X
50% of total cover:		total cover		
Remarks: (If observed, list morphological adaptations bel	· ·			
Site fails to meet hydrophytic vegetatio	n criteria	l.		

		to the dep	oth needed to docun			or confirm	the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	<u></u> %	Redox Color (moist)	<u>k Feature</u> %	s Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-2	10 YR 3/2	100						clay loam
2-8	10 YR 4/3	95	7.5 YR 5/6	5	С	М		clay loam
8-18	10 YR 4/3	40						clay loam; mixed soils
	7.5 YR 5/8	30						clay loam; mixed soils
	Gley 1 7/10Y	30		-	-			clay
	<u> </u>							
1=			Dod and Mark MC				21	Di Barataira M Matri
			=Reduced Matrix, MS LRRs, unless other			ams.		PL=Pore Lining, M=Matrix.  for Problematic Hydric Soils <sup>3</sup> :
Histosol			Polyvalue Be		· ·	RR S. T. L		Muck (A9) <b>(LRR O)</b>
	ipedon (A2)		Thin Dark Su					Muck (A10) (LRR S)
Black Hi			Loamy Mucky			R O)		ted Vertic (F18) (outside MLRA 150A,B)
=	n Sulfide (A4)		Loamy Gleye		(F2)			ont Floodplain Soils (F19) (LRR P, S, T)
=	Layers (A5)	. T II\	Depleted Mat	` '	-c)			alous Bright Loamy Soils (F20)
=	Bodies (A6) <b>(LRR F</b> cky Mineral (A7) <b>(L</b>		Redox Dark S  Depleted Dar	,	,		1 1 '	RA 153B) arent Material (TF2)
=	esence (A8) (LRR I		Redox Depre		` '			Shallow Dark Surface (TF12)
=	ck (A9) (LRR P, T)	•	Marl (F10) <b>(L</b>		,			(Explain in Remarks)
	l Below Dark Surfac	ce (A11)	Depleted Och		-	-	ò	
	rk Surface (A12)		Iron-Mangane			-	=	cators of hydrophytic vegetation and
=	airie Redox (A16) <b>(</b> lucky Mineral (S1) <b>(</b>		· <b>—</b>	, ,	•	, U)		tland hydrology must be present, ess disturbed or problematic.
=	leyed Matrix (S4)	Litit O, O,	Reduced Ver	. , ,	•	50A. 150B)		ess distarbed or problematic.
=	edox (S5)		Piedmont Flo	. ,	•			
Stripped	Matrix (S6)		Anomalous B	right Loa	my Soils (	F20) (MLR	A 149A, 153C	, 153D)
	face (S7) (LRR P,	-					1	
_	.ayer (if observed)	):						
Type: Depth (inc	phos):						Hydric Soil	Present? Yes No X
Domorko	, <u> </u>						nyunc 30ii	rieseiit: iesNo
Si	te fails to me	et hydr	ic soil criteria.					

Project/Site: Bryant Parkway Alternative B	City/County: Bryant / Saline	Sampling Date: 10/4/2018
Applicant/Owner: City of Bryant	State: AR	Sampling Point: DP 6
Investigator(s): Cassie Schmidt	Section, Township, Range: Sec 26, T 1S, R14W	
forested wetland at toe of slope	, concave	a 0
Subregion (LRR or MLRA): Lat: 34.600		Datum: NAD83
Subregion (LRR or MLRA): Lat: 34.600  Soil Map Unit Name: 32 - Udorthents	NWI classifi	cation: R4SBC
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No ( <b>I</b> f no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr		
SUMMARY OF FINDINGS – Attach site map showing		
	<u> </u>	, , ,
Hydrophytic Vegetation Present? Yes X No	10 1110 0111111111111111111111111111111	
Hydric Soil Present?         Yes X         No           Wetland Hydrology Present?         Yes X         No	within a Wetland? Yes X	No
Remarks:		
Site meets all three wetland criteria.		
HYDROLOGY		
Wetland Hydrology Indicators:		ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	<del></del>	Cracks (B6)
Surface Water (A1)  Aquatic Fauna (B1)		getated Concave Surface (B8)
✓ High Water Table (A2)       ✓ Marl Deposits (B1:         ✓ Saturation (A3)       ✓ Hydrogen Sulfide		' '
		Water Table (C2)
Sediment Deposits (B2)  Sediment Deposits (B2)  Presence of Redu		
		/isible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface		Position (D2)
Iron Deposits (B5) Other (Explain in F	<u> </u>	` '
Inundation Visible on Aerial Imagery (B7)	✓ FAC-Neutra	l Test (D5)
Water-Stained Leaves (B9)	Sphagnum r	moss (D8) <b>(LRR T, U)</b>
Field Observations:	0.4"	
Surface Water Present? Yes X No Depth (inches		
Water Table Present? Yes X No Depth (inches	· ·	<b>Y</b>
Saturation Present? Yes X No Depth (inches (includes capillary fringe)	s): surface Wetland Hydrology Prese	nt? Yes <sup>X</sup> No
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if available:	
Remarks:		
Site meets wetland hydrology criteria.		
One meets welland hydrology officing.		
Hydrology appears to be maintained from pos	sible stream located to southeas	t and off site.
The street of the street str		

Sampling Point: DP 6

#### **VEGETATION** (Four Strata) – Use scientific names of plants.

200 radius		Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30' radius )		Species?		Number of Dominant Species
1. black willow, Salix nigra	30	<u>Y</u>	FAC	That Are OBL, FACW, or FAC: 8 (A)
2. loblolly pine, Pinus taeda	20	<u>Y</u>	FAC	Total Number of Dominant
3. sweetgum, Liquidambar styraciflua		<u> </u>		Species Across All Strata: 8 (B)
				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
8				OBL species x 1 =
		= Total Cov		FACW species x 2 =
50% of total cover: 50	20% of	total cover:		
Sapling/Shrub Stratum (Plot size: 15' radius )				FACUL species x 3 =
1. sweetgum, Liquidambar styraciflua	20	<u>Y</u>	FAC	FACU species x 4 =
2. common buttonbush, Cephalanthus occidentalis	20	<u>Y</u>	OBL	UPL species x 5 =
3. red maple, Acer rubrum	10	<u>Y</u>	FAC	Column Totals: (A) (B)
4				Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				☑ 2 - Dominance Test is >50%
8				3 - Prevalence Index is ≤3.0 <sup>1</sup>
	50	= Total Cov	er	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover: <u>25</u>	20% of	total cover:	10	
Herb Stratum (Plot size: 5' radius )				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1. woolgrass, Scirpus cyperinus	5	N	OBL	be present, unless disturbed or problematic.
2. common rush, Juncus effusus	40	Υ	OBL	Definitions of Four Vegetation Strata:
3. spike rush, Eleocharis sp.	20	Υ	OBL	Tree Meady plants avaluding since 2 in (7.6 am) ar
4				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
5				height.
6.				Sapling/Shrub – Woody plants, excluding vines, less
7.				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8.				Herb – All herbaceous (non-woody) plants, regardless
9.				of size, and woody plants less than 3.28 ft tall.
10.				
11.				Woody vine – All woody vines greater than 3.28 ft in height.
12.				noight.
	65	= Total Cov	er	
50% of total cover: 32.5				
Woody Vine Stratum (Plot size:	2070 01	total cover.		
1.				
a None Observed				
3				
4				
5				Hydrophytic
500/ 5/ 1		= Total Cov		Vegetation   Present?   Yes X   No
50% of total cover:		total cover:		
Remarks: (If observed, list morphological adaptations belo	OW).			

Site meets hydrophytic vegetation criteria.

Of the 19 species of Eleocharis listed in Arkansas for the AGCP Region, the majority (68%) are OBL (and the rest are listed as FACW).

		to the dep	th needed to docum			or confirm	the absence	of indicators.)	
Depth (inches)	<u>Matrix</u> Color (moist)	<u></u> %	Color (moist)	<u>k Feature</u> %	s Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Rer	marks
0-10	10 YR 5/1	60	7.5 YR 5/8	40	C	M&PL	TOXIGIO	clay loam	Harko
10-20	10 YR 5/1	80	7.5 YR 5/8	20		M&PL		clay loam	
					-				
					_				_
¹Type: C=Cc	ncentration, D=Dep	oletion, RM	=Reduced Matrix, MS	=Maske	d Sand Gr	ains.	<sup>2</sup> Location:	PL=Pore Lining, M	л=Matrix.
Hydric Soil I	ndicators: (Applic	able to all	LRRs, unless other	wise not	ted.)		Indicators	for Problematic H	lydric Soils³:
Histosol			Polyvalue Be					Muck (A9) <b>(LRR O)</b>	
	ipedon (A2)		Thin Dark Su				1 1	Muck (A10) (LRR S	
Black His			Loamy Mucky			R O)			utside MLRA 150A,B)
	n Sulfide (A4) Layers (A5)		Loamy Gleye ✓ Depleted Mat		(FZ)			alous Bright Loamy	s (F19) <b>(LRR P, S, T)</b>
	Bodies (A6) <b>(LRR F</b>	P. T. U)	Redox Dark S	, ,	F6)			RA 153B)	00/13 (1 20)
=	cky Mineraĺ (A7) <b>(L</b> l		Depleted Dar	k Surface	e (F7)		1 1 '	arent Material (TF2	2)
Muck Pre	esence (A8) <b>(LRR l</b>	J)	Redox Depre	ssions (F	8)			Shallow Dark Surfac	, ,
=	ck (A9) (LRR P, T)	(4.4.4)	☐ Marl (F10) <b>(L</b>			- 43	U Other	(Explain in Remark	s)
= '	l Below Dark Surfac rk Surface (A12)	e (A11)	☐ Depleted Och☐ Iron-Mangane		-	-	T) <sup>3</sup> India	cators of hydrophyti	io vogotation and
=	rairie Redox (A16) (	MLRA 150	=		. ,		•	tland hydrology mu	=
=	ucky Mineral (S1) (		Delta Ochric	, ,	•	, -,		ess disturbed or pro	•
=	leyed Matrix (S4)		Reduced Ver		-	0A, 150B)			
_	edox (S5)		Piedmont Flo						
= ::	Matrix (S6)			right Loa	my Soils (	F20) <b>(MLR</b>	A 149A, 153C	, 153D)	
· <u> </u>	face (S7) (LRR P, S .ayer (if observed)						1		
Type:	ayer (ii observed)	•							
Depth (inc	has).		<u></u>				Hydric Soil	Present? Yes	X No
Domorko	, -						Tiyano con		
Si	te meets hyd	ric soil	criteria.						

Project/Site: Bryant Parkway Alternative B	City/County: Bryant / Saline	Sampling Date: 10/4/2018
Applicant/Owner: City of Bryant	State:	AR Sampling Point: DP 7
Investigator(s): Cassie Schmidt	Section, Township, Range: Sec 26, T	1S, R14W
Landform (hillslane, terrace, etc.); cleared area (side of trail) in woods	Local relief (concave, convey, none):	convex Slope (%). 1
Subregion (LRR or MLRA): Lat: 34.600	'70 Long: -92.4779	18 Datum: NAD83
Soil Map Unit Name: 32 - Udorthents	NV	VI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of ye		
Are Vegetation, Soil, or Hydrology significantly		stances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pro		any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing		
	1	
Hydrophytic Vegetation Present?  Yes No X  Hydrig Seil Present?	Is the Sampled Area	
Hydric Soil Present?         Yes	within a Wetland?	Yes No X
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:		dary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		urface Soil Cracks (B6)
Surface Water (A1) High Water Table (A2) Aquatic Fauna (B1:		parsely Vegetated Concave Surface (B8) ainage Patterns (B10)
Saturation (A3)  Hydrogen Sulfide C		oss Trim Lines (B16)
		y-Season Water Table (C2)
Sediment Deposits (B2)	ed Iron (C4)	ayfish Burrows (C8)
	` ' =	ituration Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)  Thin Muck Surface		eomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in R☐ Inundation Visible on Aerial Imagery (B7)		nallow Aquitard (D3) NC-Neutral Test (D5)
Water-Stained Leaves (B9)	<del></del>	shagnum moss (D8) (LRR T, U)
Field Observations:		
Surface Water Present? Yes No X Depth (inches	:	
Water Table Present? Yes No X Depth (inches		
Saturation Present? Yes No _X Depth (inches (includes capillary fringe)	: >18" Wetland Hydrolog	gy Present? Yes No X
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if available:	
Danada		
Remarks: Site fails to meet wetland hydrology criteria.		
Site fails to fileet wetland flydrology criteria.		

#### **VEGETATION** (Four Strata) – Use scientific names of plants.

<b>/EGETATION (Four Strata)</b> – Use scientific na	ames of p	lants.		Sampling Point: DP 7	
	Absolute	Dominant	Indicator	Dominance Test worksheet:	
<u>Tree Stratum</u> (Plot size:)	% Cover	Species?	Status	Number of Dominant Species	
1				That Are OBL, FACW, or FAC: 1 (A)	
2. None Observed				Total Number of Dominant	
3				Species Across All Strata: $\frac{2}{}$ (B)	
4				Descent of Descinant Coopies	
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/E	3)
6					
7				Prevalence Index worksheet:	
8				Total % Cover of: Multiply by:	
		= Total Cov		OBL species x 1 =	
50% of total cover:	20% o	f total cover	:	FACW species x 2 =	
Sapling/Shrub Stratum (Plot size:)				FAC species x 3 =	
1				FACU species x 4 =	
2. None Observed				UPL species x 5 =	
3.				Column Totals: (A) (B	,)
				Prevalence Index = B/A =	
5				Hydrophytic Vegetation Indicators:	
6				1 - Rapid Test for Hydrophytic Vegetation	
7				2 - Dominance Test is >50%	
8				3 - Prevalence Index is ≤3.0 <sup>1</sup>	
		= Total Co		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
50% of total cover:	20% o	f total cover	:		
Herb Stratum (Plot size: 5' radius )		V	F40	<sup>1</sup> Indicators of hydric soil and wetland hydrology must	
1. broomsedge bluestem, Andropogon virginicus				be present, unless disturbed or problematic.	
2	_			Definitions of Four Vegetation Strata:	
3	_			<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) of	or
4				more in diameter at breast height (DBH), regardless of	
5				height.	
6				Sapling/Shrub – Woody plants, excluding vines, less	3
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
8				Herb – All herbaceous (non-woody) plants, regardless	s
9				of size, and woody plants less than 3.28 ft tall.	_
10		. <u></u>		Woody vine – All woody vines greater than 3.28 ft in	
11				height.	
12.					
	90	= Total Cov	ver		
50% of total cover: 45	20% o	f total cover			
Woody Vine Stratum (Plot size: 30' radius )					
1 blackberry, Rubus sp.*	10	Υ	FACU		
2.					
3					
٥		· <del></del>	-		
۲	_	· <del></del>			
5	10			Hydrophytic	
<b>-</b> 200		= Total Cov		Vegetation   Present?   Yes No X	
50% of total cover: <sup>5</sup>	20% o	total cover	:		

Remarks: (If observed, list morphological adaptations below).

Site fails to meet hydrophytic vegetation criteria; prevalence index cannot be used as indicators of wetland hydrology are not present.

\*Of the 11 species of Rubus listed in Arkansas for the AGCP Region, the majority (55%) are FACU or UPL.

(inches)	Matrix Color (moist)	0/		x Features	Turn : 1	Loc <sup>2</sup>	Tax#		Damel.	
)-18	Color (moist) 10 YR 3/3	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc	<u>Texture</u>	loam	Remarks	
	10 111 0/0							- Ioani		
	-									
	-									
								-		
ype: C=C	oncentration, D=Dep	oletion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ains.	<sup>2</sup> Location:	PL=Pore L	₋ining, M=Matr	ix.
dric Soil	Indicators: (Applic	able to all L	RRs, unless othe	rwise note	d.)				matic Hydric	
Histosol	(A1)		☐ Polyvalue Be	elow Surfac	e (S8) <b>(L</b>	RR S, T, U	) <u> </u>	luck (A9) <b>(</b> I	LRR O)	
Histic Ep	oipedon (A2)		Thin Dark Su	ırface (S9)	(LRR S,	T, U)		luck (A10)		
Black Hi	stic (A3)		Loamy Muck	y Mineral (	F1) <b>(LRR</b>	(O)	Reduc	ed Vertic (F	-18) <b>(outside</b>	MLRA 150A,
= -	n Sulfide (A4)		Loamy Gleye	-	2)				ain Soils (F19	
===	d Layers (A5)		Depleted Ma						t Loamy Soils	(F20)
= ~	Bodies (A6) (LRR F		Redox Dark	•	,		1 1 '	RA 153B)	:-L(TEO)	
=	icky Mineral (A7) (L		Depleted Da					arent Mater	riai (TF2) k Surface (TF1	10)
=	esence (A8) <b>(LRR l</b> ıck (A9) <b>(LRR P, T)</b>	<i>)</i> )	Redox Depre	,	)			ומווטש טמו (Explain in	,	12)
=	d Below Dark Surfac	re (A11)	Depleted Oc		MI RA 1	51)	Ouler	(Explain in	ixemarks)	
-	ark Surface (A12)	00 (/ (/ 1)	Iron-Mangar	, ,		•	<b>T)</b> <sup>3</sup> Indic	ators of hy	drophytic vege	tation and
=	rairie Redox (A16) (	MLRA 150A	=					-	logy must be p	
=	lucky Mineral (S1) (		Delta Ochric	, , ,		,		-	ed or problema	
Sandy C	Bleyed Matrix (S4)		Reduced Ve	rtic (F18) <b>(</b> I	VILRA 15	0A, 150B)				
☐ Sandy R	ledox (S5)		Piedmont Flo	oodplain So	ils (F19)	(MLRA 149	9A)			
=	Matrix (S6)		Anomalous I	Bright Loan	ny Soils (	=20) <b>(MLR</b> /	A 149A, 153C	, 153D)		
	rface (S7) (LRR P,						1			
estrictive l	_ayer (if observed)	:								
Type:										V
	ches):						Hydric Soil	Present?	Yes	No X
Depth (inc			onil oritoria							
omarke:	•	et hydric	· Com composa							
amarke:	ite fails to me	et hydric	son criteria.							
amarke:	•	et hydric	son chiena.							
amarke:	•	et hydric	son chiena.							
amarke:	•	et hydric	son criteria.							
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omarke:	•	et hydric	s son criteria.							
omarke:	•	et hydric	s son criteria.							
amarke:	•	et hydric	s son criteria.							
marke:	•	et hydric	s son criteria.							

Project/Site: Bryant Parkway Alternative B	City/County: Bryant / Saline	Sampling Date: 10/4/2018
Applicant/Owner: City of Bryant	State: AR	Sampling Point: DP 8
Investigator(s): Cassie Schmidt	Section, Township, Range: Sec 26, T1S,	
PEM at lowest corner of field		ncave 0
Subregion (LRR or MLRA): Lat: 34.600	165 Long: -92.476944	Datum: NAD83
Subregion (LRR or MLRA): Lat: 34.600  Soil Map Unit Name: 32 - Udorthents	NWI c	classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes <sup>X</sup> No (If no, expla	ain in Remarks.)
Are Vegetation, Soil, or Hydrology significantl		nces" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr		
SUMMARY OF FINDINGS – Attach site map showing		
	1	
Hydrophytic Vegetation Present?  Yes X  No	Is the Sampled Area	
Hydric Soil Present?  Yes X  No	within a Wetland? Yes	s <u>X</u> No
Wetland Hydrology Present? Yes X No No		
Site meets all three wetland criteria.		
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary	/ Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surfac	ce Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B		ely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B1	_	age Patterns (B10)
Saturation (A3)  Hydrogen Sulfide		Trim Lines (B16)
☐ Water Marks (B1)       ☐ Oxidized Rhizospl         ☐ Sediment Deposits (B2)       ☐ Presence of Redu		eason Water Table (C2) ish Burrows (C8)
		ation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface		norphic Position (D2)
Iron Deposits (B5) Other (Explain in I	Remarks)	ow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	<del>=</del>	Neutral Test (D5)
Water-Stained Leaves (B9)	Sphag	gnum moss (D8) (LRR T, U)
Field Observations:  Surface Water Present?  Yes X  No Depth (inchest)	.,. 0-5"	
Water Table Present?  Yes X  No Depth (inches		
Saturation Present? Yes X No Depth (inches		Present? Yes <sup>X</sup> No
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos		
Describe Recorded Data (Stream gauge, monitoring well, aerial prior	os, previous inspections), ii available.	
Remarks:		
Site meets wetland hydrology criteria.		

#### **VEGETATION** (Four Strata) – Use scientific names of plants.

EGETATION (Four Strata) – Use scientific na	ames of p	lants.		Sampling Point: DP 8
Tree Stratum (Plot size:)  1			ant Indicator es? Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC:   (A)
None Observed 3.				Total Number of Dominant Species Across All Strata: 2 (B)
l, 5 6				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
7.				Prevalence Index worksheet:
3.	_	-		Total % Cover of: Multiply by:
		= Total (	Cover	OBL species x 1 =
50% of total cover:	20% c	of total co	ver:	FACW species x 2 =
Sapling/Shrub Stratum (Plot size:)				FAC species x 3 =
1				FACU species x 4 =
2. None Observed	_			UPL species x 5 =
3				Column Totals: (A) (B)
4. <u> </u>				Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
S				1 - Rapid Test for Hydrophytic Vegetation
7.				
3				3 - Prevalence Index is ≤3.0 <sup>1</sup>
		= Total (	Cover	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover:	20% c	of total co	ver:	
Herb Stratum (Plot size: 5' radius )	4.0		F1014	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
barnyardgrass, Echinochloa crus-galli	10	N	FACW	be present, unless disturbed or problematic.
switchgrass, Panicum virgatum	50	- <del>Y</del>	FAC ORL	Definitions of Four Vegetation Strata:
broadleaf cattail, Typha latifolia	10	N	OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
flat sedge, Cyperus sp.*	30	Y	FACW	more in diameter at breast height (DBH), regardless of height.
6 7				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
3 9				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
10				Woody vine – All woody vines greater than 3.28 ft in
l1				height.
12				
	100	= Total (	Cover	
50% of total cover: <sup>50</sup>	20% c	of total co	ver: 20	
Noody Vine Stratum (Plot size:)				
1				
2. None Observed	_			
3	_			
4				
5	_			Hydrophytic
		= Total (	Cover	Vegetation
50% of total cover:	20% c	of total co	ver:	Present? Yes <u>X</u> No
Remarks: (If observed, list morphological adaptations bel	low).			ı

Site meets hydrophytic vegetation criteria.

\*Of the 30 species of Cyperus listed in Arkansas for the AGCP Region, 90% are FAC or wetter, with the majority being FACW.

		to the dep	oth needed to docum			or confirm	the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Feature: %	sType <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-2	10 YR 3/2	40	<u>Color (moist)</u>		Турс		TOXIGIO	silty clay loam
	10 YR 4/2	60						
2-6	10 YR 5/4	100						silty clay loam
6-18	10 YR 2/1	80	10 YR 5/8	20				silty clay loam
0-10	10 11 2/1		10 111 3/6			IVI		Silly Clay Ioani
		<del>-</del>						
	•		=Reduced Matrix, MS			ains.		PL=Pore Lining, M=Matrix.
		cable to all	LRRs, unless other		=			for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1) ipedon (A2)		Polyvalue Bel					Muck (A9) <b>(LRR O)</b> Muck (A10) <b>(LRR S)</b>
Black Hi			Loamy Mucky				1 1	ced Vertic (F18) <b>(outside MLRA 150A,B</b>
	n Sulfide (A4)		Loamy Gleye			,		iont Floodplain Soils (F19) (LRR P, S, T)
=	Layers (A5)		Depleted Mat	, ,				alous Bright Loamy Soils (F20)
=	Bodies (A6) (LRR F		Redox Dark S	`	,		1 1 '	RA 153B)
=	cky Mineral (A7) <b>(L</b> esence (A8) <b>(LRR l</b>		Depleted Dar Redox Depre					arent Material (TF2) Shallow Dark Surface (TF12)
=	ck (A9) <b>(LRR P, T)</b>	-,	☐ Marl (F10) <b>(L</b>		0,			(Explain in Remarks)
	l Below Dark Surfac	ce (A11)	Depleted Och		-	-		
=	rk Surface (A12)		Iron-Mangane				-	cators of hydrophytic vegetation and
=	airie Redox (A16) <b>(</b> lucky Mineral (S1) <b>(</b>		A) Umbric Surfa	. ,	•	, U)		tland hydrology must be present, ess disturbed or problematic.
=	leyed Matrix (S4)	Little 0, 0,	Reduced Ver		-	0A, 150B)		bus distanced of problematic.
=	edox (S5)		Piedmont Flo			-		
=	Matrix (S6)		Anomalous B	right Loar	my Soils (	F20) <b>(MLR</b>	A 149A, 153C	, 153D)
	face (S7) (LRR P,						1	
Type:	.ayer (if observed)	•						
Depth (inc	hes).						Hydric Soil	Present? Yes X No No
Domorko	, -						i i i yanio con	
Si	te meets hyd	lric soil	criteria.					

Project/Site: Bryant Parkway Alternative B	City/County: Bryant / Saline	Sampling Date:
Applicant/Owner: City of Bryant		AR Sampling Point: DP 9
Investigator(s): Cassie Schmidt	Section, Township, Range: Sec 26, T	
	Local relief (concave, convex, none): _	
Subregion (LRR or MLRA): Lat: 34.603		
Soil Map Unit Name: 32 - Udorthents	NV	VI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of ye		
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circum	nstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain a	any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, tr	ansects, important features, etc.
Libration Description Description No. X		
Hydrophytic Vegetation Present?  Yes No _X  Hydric Soil Present?  Yes X		<b>v</b>
Hydric Soil Present?         Yes X         No           Wetland Hydrology Present?         Yes         No X	within a Wetland?	Yes No _X
Remarks:		
Site fails to meet all three wetland criteria.		
HYDROLOGY		
Wetland Hydrology Indicators:	Second	dary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		urface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1		parsely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B1)		ainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide	Odor (C1)	oss Trim Lines (B16)
		y-Season Water Table (C2)
Sediment Deposits (B2)		ayfish Burrows (C8)
	` ' =	ituration Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface ☐ Iron Deposits (B5) ☐ Other (Explain in F		eomorphic Position (D2) allow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)		AC-Neutral Test (D5)
Water-Stained Leaves (B9)	=	phagnum moss (D8) (LRR T, U)
Field Observations:		
Surface Water Present? Yes No X Depth (inches		
Water Table Present? Yes No X Depth (inches		v
Saturation Present? Yes No X Depth (inches (includes capillary fringe)	): >18" Wetland Hydrolog	gy Present? Yes No X
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if available:	
Remarks:		
Site fails to meet wetland hydrology criteria.		
One fails to fricer wetland flydrology efficial		

Sampling Point: DP 9

## **VEGETATION (Four Strata)** – Use scientific names of plants.

		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size:) 1	% Cover	Species?	Status_	Number of Dominant Species That Are OBL, FACW, or FAC:   (A)
2. None Observed				
3.				Total Number of Dominant Species Across All Strata:   2 (B)
4.				(5)
5.				Percent of Dominant Species That Are OBL, FACW, or FAC:  50  (A/B)
6				Prevalence Index worksheet:
7				
8				
	:	= Total Co	ver	OBL species x 1 =
50% of total cover:	20% of	total cover	:	FACW species x 2 =
Sapling/Shrub Stratum (Plot size:)				FAC species x 3 =
1				FACU species x 4 =
2. None Observed				UPL species x 5 =
3.				Column Totals: (A) (B)
4.				Prevalence Index = B/A =
5.				
6.				Hydrophytic Vegetation Indicators:
7				☐ 1 - Rapid Test for Hydrophytic Vegetation
8				☐ 2 - Dominance Test is >50%
0		= Total Co		3 - Prevalence Index is ≤3.0 <sup>1</sup>
EOO/ of total govern				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover:	20% 01	total cover	•	
Herb Stratum (Plot size: 5' radius )  1 broomsedge bluestem, Andropogon virginicus	30	Υ	FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
sericea lespedeza, Lespedeza cuneata	50	<u>'</u>	FACU	be present, unless disturbed or problematic.
	10	 N	FACU	Definitions of Four Vegetation Strata:
J	<del></del>	N	FACO	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
4. switchgrass, Panicum virgatum	10		FAC	more in diameter at breast height (DBH), regardless of
5				height.
6				Sapling/Shrub – Woody plants, excluding vines, less
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8				<b>Herb</b> – All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10				Woody vine – All woody vines greater than 3.28 ft in
11				height.
12				
	100	= Total Cov	ver	
50% of total cover: 50	20% of	total cover	<u>20</u>	
Woody Vine Stratum (Plot size:)				
2. None Observed			-	
3				
4			·	
5				Hydrophytic
		= Total Cov		Vegetation   Present?   Yes No _X
50% of total cover:		total cover	:	
Remarks: (If observed, list morphological adaptations beloe Site fails to meet hydrophytic vegetation wetland hydrology are not present.		ı; preva	llence ir	ndex cannot be used as indicators of

Profile Desc Depth		e to the dep	oth needed to docur	nent the		or confirm	the absence	of indicators.)
(inches)	Matrix Color (moist)	%	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-4	10 YR 4/2	100						sandy clay loam
4-18	10 YR 4/2	80	7.5 YR 6/8	10	C	М		sandy clay loam
	Gley 1 7/10Y	10						clay; mixed soils
				-				
			=Reduced Matrix, MS			rains.		PL=Pore Lining, M=Matrix.
		icable to all	LRRs, unless other					for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1) pipedon (A2)		☐ Polyvalue Be ☐ Thin Dark Su				. —	Muck (A9) <b>(LRR O)</b> Muck (A10) <b>(LRR S)</b>
Black Hi			Loamy Muck	•				eed Vertic (F18) <b>(outside MLRA 150A,E</b>
=	n Sulfide (A4)		Loamy Gleye	-		,		ont Floodplain Soils (F19) (LRR P, S, T
	l Layers (A5)		Depleted Ma	, ,				alous Bright Loamy Soils (F20)
_	Bodies (A6) (LRR	-	Redox Dark	,				RA 153B)
	icky Mineral (A7) <b>(I</b> esence (A8) <b>(LRR</b>		) Depleted Dai		` '			arent Material (TF2) Shallow Dark Surface (TF12)
=	ick (A9) <b>(LRR P, T</b> )		Marl (F10) (L	`	0)			(Explain in Remarks)
=	d Below Dark Surfa	'	Depleted Ocl	•	) <b>(MLRA</b> 1	l <b>5</b> 1)	<del></del>	,
=	ark Surface (A12)		Iron-Mangan					cators of hydrophytic vegetation and
=	rairie Redox (A16)	-	· <b>—</b>		-	-		tland hydrology must be present,
=	lucky Mineral (S1) Bleyed Matrix (S4)	(LKK U, S)	☐ Delta Ochric☐ Reduced Ver		-			ess disturbed or problematic.
=	ledox (S5)		Piedmont Flo		-	-		
_	Matrix (S6)						A 149A, 153C	, 153D)
	rface (S7) (LRR P,						7	
	_ayer (if observed	i):						
Type:	-h \.						Usadada Cadl	Present? Yes X No
Depth (inc	ones):						Hydric Soil	Present? Yes ^ No
Remarks: S	ite meets hyd	dric soil	criteria.					
	_							

Project/Site: Bryant Parkway Alternative B	City/County: Bryant / Saline	Sampling Date: 10/4/2018
Applicant/Owner: City of Bryant	State: AP	Sampling Point: DP 10
Investigator(s): Cassie Schmidt	Section, Township, Range: Sec 26, T1S	S, R14W
Landform (hillslone, terrace, etc.). PEM at lowest corner of field	Local relief (concave, convey, none). CC	oncave Slone (%). 0
Subregion (LRR or MLRA): Lat: 34.609	5476 Long: -92.475279	Datum: NAD83
Soil Map Unit Name: 32 - Udorthents	NWI	classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of y		
Are Vegetation, Soil, or Hydrology significantl		tances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr		y answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing		
	1	
Hydrophytic Vegetation Present?  Yes X  No	Is the Sampled Area	
Hydric Soil Present?  Yes X  No	within a Wetland?	es <u>X</u> No
Wetland Hydrology Present? Yes X No No		
Site meets all three wetland criteria.		
HYDROLOGY		
Wetland Hydrology Indicators:		ry Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		ace Soil Cracks (B6)
Surface Water (A1) High Water Table (A2) Aquatic Fauna (B) Marl Deposits (B1)		rsely Vegetated Concave Surface (B8) nage Patterns (B10)
Saturation (A3)  Hydrogen Sulfide		s Trim Lines (B16)
		Season Water Table (C2)
Sediment Deposits (B2) Presence of Redu		rfish Burrows (C8)
Drift Deposits (B3)	ction in Tilled Soils (C6) 🔲 Satu	ıration Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	· · · · <del>_</del>	morphic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in I		llow Aquitard (D3)
✓ Inundation Visible on Aerial Imagery (B7)  ☐ Water-Stained Leaves (B9)		:-Neutral Test (D5) agnum moss (D8) (LRR T, U)
Field Observations:	Эрпа	agridin moss (Do) (ERR 1, U)
Surface Water Present? Yes X No Depth (inches	s): <sup>0-4"</sup>	
Water Table Present? Yes X No Depth (inches		
Saturation Present? Yes X No Depth (inches	s): surface Wetland Hydrology	y Present? Yes X No
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos	os, previous inspections), if available:	
Remarks:		
Site meets wetland hydrology criteria.		

Sampling Point: DP 10

## **VEGETATION (Four Strata)** – Use scientific names of plants.

001 - 1		Dominant		Dominance Test worksheet:	
<u>Tree Stratum</u> (Plot size: 30' radius )  1 black willow, Salix nigra	% Cover	Species?	Status OBL	Number of Dominant Species	
I				That Are OBL, FACW, or FAC:	(A)
2				Total Number of Dominant	
3				Species Across All Strata: (	(B)
4				Percent of Dominant Species	
5				·	(A/B)
6				Prevalence Index worksheet:	
7				Total % Cover of: Multiply by:	
8					
	10	= Total Cov	er	OBL species x 1 =	
50% of total cover: 5	20% of	total cover	2	FACW species x 2 =	
Sapling/Shrub Stratum (Plot size:)				FAC species x 3 =	
1				FACU species x 4 =	
2. None Observed				UPL species x 5 =	
3				Column Totals: (A)	(B)
4				Prevalence Index = B/A =	
5				Hydrophytic Vegetation Indicators:	
6.				1 - Rapid Test for Hydrophytic Vegetation	
7.				2 - Dominance Test is >50%	
8.				3 - Prevalence Index is ≤3.0 <sup>1</sup>	
		= Total Cov	er	1 <b>=</b>	`
50% of total cover:				Problematic Hydrophytic Vegetation¹ (Explain	)
Herb Stratum (Plot size: 5' radius )		101011		11. 12. 14. 11. 15. 11. 11. 11. 11. 11. 11. 11. 11	4
1 fowl mannagrass, Glyceria striata	10	N	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology mube present, unless disturbed or problematic.	JST
broadleaf cattail, Typha latifolia	50	Y	OBL	Definitions of Four Vegetation Strata:	
3. woolgrass, Scirpus cyperinus	10	N	OBL	John Marie of Four Vogetation of the	
4 primrose-willow, Ludwigia sp.*	20	Y	OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cr more in diameter at breast height (DBH), regardles	
5				height.	55 UI
6				Sapling/Shrub – Woody plants, excluding vines, lethan 3 in. DBH and greater than 3.28 ft (1 m) tall.	ess
7					
8				Herb – All herbaceous (non-woody) plants, regard	less
9				of size, and woody plants less than 3.28 ft tall.	
10				Woody vine – All woody vines greater than 3.28 ft	t in
11				height.	
12					
45		= Total Cov			
50% of total cover: 45	20% of	total cover	18		
Woody Vine Stratum (Plot size:)					
1					
2. None Observed					
3					
4					
5				Hydrophytic	
		= Total Cov	er	Vegetation	
50% of total cover:	20% of	total cover		Present? Yes X No No	
Remarks: (If observed, list morphological adaptations belo	 ow).				
Site meets hydrophytic vegetation criter					
*Of the 18 species of Ludwigia listed in	Arkansa	as for th	e AGC	P Region 93% are OBI	

US Army Corps of Engineers

		to the dep	th needed to docum			or confirm	the absence	of indicators.)	
Depth (inches)	Matrix Color (moist)	<del></del> %	Color (moist)	<u>Feature</u> %	s Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remar	·ks
0-8	10 YR 3/2	95	7.5 YR 5/8	5	C	M	TOXIGIO	clay loam	NO .
8-12	Gley 1 3/10Y	95						clay loam	
	G.65 1 6/101				-			olay loam	
				-				-	
					-				
						· <u></u>			
¹Type: C=Co	ncentration, D=Der	letion, RM:	=Reduced Matrix, MS	=Maske	d Sand Gr	ains.	<sup>2</sup> Location:	PL=Pore Lining, M=N	Matrix.
Hydric Soil I	ndicators: (Applic	able to all	LRRs, unless other	wise not	ted.)		Indicators	for Problematic Hyd	Iric Soils³:
☐ Histosol			Polyvalue Bel	ow Surfa	ace (S8) <b>(L</b>	RR S, T, L		Muck (A9) <b>(LRR O)</b>	
=	ipedon (A2)		Thin Dark Sur				1 1	Muck (A10) (LRR S)	
Black His			Loamy Mucky			R O)		ced Vertic (F18) (outsi	-
=	n Sulfide (A4) Layers (A5)		Loamy Gleyed Depleted Mat		(F2)			ont Floodplain Soils (F alous Bright Loamy So	
	Bodies (A6) <b>(LRR F</b>	P. T. U)	Redox Dark S	` '	F6)			RA 153B)	Jiis (1 20)
=	cky Mineral (A7) <b>(L</b>		=	,	,		1 1 '	arent Material (TF2)	
Muck Pre	esence (A8) <b>(LRR U</b>	J)	Redox Depre	ssions (F	8)		☐ Very S	Shallow Dark Surface (	(TF12)
=	ck (A9) <b>(LRR P, T)</b>		☐ Marl (F10) <b>(L</b> I				U Other	(Explain in Remarks)	
	Below Dark Surfac	e (A11)	Depleted Och		-	-	T) 31-21-		
=	rk Surface (A12) airie Redox (A16) (	MI RA 150.	☐ Iron-Mangane A) ☐ Umbric Surfac		. ,	•	•	cators of hydrophytic v tland hydrology must b	-
=	ucky Mineral (S1) (		Delta Ochric (	, ,	•	, 0,		ess disturbed or proble	•
=	leyed Matrix (S4)	, ,	Reduced Vert		-	50A, 150B)		•	
Sandy R	edox (S5)		Piedmont Flo	odplain S	Soils (F19)	(MLRA 14	9A)		
= ::	Matrix (S6)			right Loa	my Soils (	F20) <b>(MLR</b>	A 149A, 153C	, 153D)	
	face (S7) (LRR P, S .ayer (if observed)	-					1		
_	.ayer (ii observed)	•							
Type: Depth (inc	shoc):						Hydric Soil	Present? Yes X	No
Domorko	, -		<u> </u>				Tryunc 3011		
Si	te meets hyd	ric soil	criteria.						

Project/Site: Bryant Parkway Alternative B	_ City/County: Bryant / Salin	пе	Sampling Date: 10/4/2018
Applicant/Owner: City of Bryant	- , ,		Sampling Point: DP 11
Investigator(s): Cassie Schmidt	_ Section, Township, Range	e: Sec 26, T1S, R14W	
Landform (hillslope, terrace, etc.): field edge			Slope (%): 1
Subregion (LRR or MLRA):			
Soil Map Unit Name: 32 - Udorthents		NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes X No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significant	ly disturbed? Are "No	ormal Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally p	oroblematic? (If need	led, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point loc	ations, transects	, important features, etc.
Libration No. X			
Hydrophytic Vegetation Present?  Yes No X  Hydric Soil Present?  Yes No X	Is the Sampled Ar		<b>v</b>
Hydric Soil Present?         Yes	within a Wetland?	? Yes	No X
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply	n)	_	tors (minimum of two required)
Surface Water (A1)  Aquatic Fauna (B	•		getated Concave Surface (B8)
High Water Table (A2)  Addate Fabric (A1)  Marl Deposits (B		Drainage Pat	`
Saturation (A3) Hydrogen Sulfide		Moss Trim Li	
	heres along Living Roots (C	3) 🔲 Dry-Season	Water Table (C2)
Sediment Deposits (B2)	uced Iron (C4)	Crayfish Buri	ows (C8)
	uction in Tilled Soils (C6)	_	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)  Thin Muck Surface  Other (Evaluin in	• •	Geomorphic	` '
☐ Iron Deposits (B5) ☐ Other (Explain in Inundation Visible on Aerial Imagery (B7)	Remarks)	☐ Shallow Aqui ☐ FAC-Neutral	` ′
Water-Stained Leaves (B9)		=	noss (D8) <b>(LRR T, U)</b>
Field Observations:		<u>-</u>	
Surface Water Present? Yes No X Depth (inche			
Water Table Present? Yes No X Depth (inche			V
Saturation Present? Yes No X Depth (inche (includes capillary fringe)	s): >18" Wetla	nd Hydrology Presen	t? Yes No X
Describe Recorded Data (stream gauge, monitoring well, aerial pho	tos, previous inspections), if	f available:	
Remarks:			
Site fails to meet wetland hydrology criteria.			
The falls to most wetland my arelegy emerical			

## **VEGETATION (Four Strata)** – Use scientific names of plants.

		ants.		Sampling Point: DP 11
		Dominant		Dominance Test worksheet:
<u>Free Stratum</u> (Plot size:) I		Species?		Number of Dominant Species That Are OBL, FACW, or FAC:  (A)
None Observed				Total Number of Demain and
				Total Number of Dominant Species Across All Strata:   2 (B)
,				
,				Percent of Dominant Species That Are OBL, FACW, or FAC:  (A/E
i				· · · · · · · · · · · · · · · · · · ·
•				Prevalence Index worksheet:
				Total % Cover of: Multiply by:
		= Total Cov		OBL species x 1 =
50% of total cover:	20% of	total cover	:	FACW species x 2 =
apling/Shrub Stratum (Plot size:)				FAC species x 3 =
				FACU species x 4 =
None Observed				UPL species x 5 =
				Column Totals: (A) (B)
				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 <sup>1</sup>
		= Total Cov	er	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover:				Froblematic Hydrophytic Vegetation (Explain)
Herb Stratum (Plot size: 5' radius )				1 Indicators of budge sail and watland budgelogy must
goldenrod, Solidago altissima	50	Υ	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
sericea lespedeza, Lespedeza cuneata	50	Y	FACU	Definitions of Four Vegetation Strata:
daisy fleabane, Erigeron annuus	10	N	FACU	
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of
				height.
				Sapling/Shrub – Woody plants, excluding vines, less
				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
·				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
0				
				Woody vine – All woody vines greater than 3.28 ft in height.
1				
		= Total Cov	er	
2	110	= Total Cover		
2	110			
2	110 20% of	total cover	. 22	
2	110 20% of	total cover	: 22	
2	110 20% of	total cover		
50% of total cover: 55  Voody Vine Stratum (Plot size:)  None Observed  None Observed	20% of	total cover		
50% of total cover: 55  Voody Vine Stratum (Plot size:)  None Observed  .	20% of	total cover		
50% of total cover: 55  Voody Vine Stratum (Plot size:)  None Observed  .		total cover		Hydrophytic
Noody Vine Stratum (Plot size:)  1		total cover	. 22	

Depth   Matrix   Redox Features   Color (moist)   %   Color (moist)   %   Type   Loc   Texture   Remarks
Depteted Below Dark Surface (A12)   Ioamy sand   Ioamy sand   Ioamy sand   Ioam; mixed soils   Indicators for Problematic Hydric S
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.   Location: PL=Pore Lining, M=Matrix.
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Histosol (A2)  Histic Epipedon (A2)  Histic Epipedon (A2)  Histic (A3)  Loamy Mucky Mineral (F1) (LRR O)  Hydrogen Sulfide (A4)  Organic Bodies (A6) (LRR P, T, U)  Organic Bodies (A6) (LRR P, T, U)  Muck Presence (A8) (LRR P, T, U)  Muck Presence (A8) (LRR P, T, U)  Histic Epipedon (A2)  Depleted Dark Surface (F7)  Muck Presence (A8) (LRR P, T)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Indicators for Problematic Hydric Soils³:  Indicators for Problematic Hydric Soils*:  Indicators for Problematic Hydric Soils*
¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Histosol (A2)  Thin Dark Surface (S9) (LRR S, T, U)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Muck Presence (A8) (LRR P, T, U)  Muck Presence (A8) (LRR U)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  ¹Z Location: PL=Pore Lining, M=Matrix.  lndicators for Problematic Hydric Soils³:  Indicators for Problematic Hydric Soils*:  Indicators for Problematic Hydric Foils*:  Indicators for Problematic Hydric Foils*:  Indicators
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1) Histosol (A2) Histic Epipedon (A2) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Depleted Matrix (F2) Horganic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Huck Presence (A8) (LRR P, T) Depleted Below Dark Surface (A12) Hydrogen Sulface (A12) Horganic Bodies (A61) Hydrogen Sulfide (A41) Hydrogen Sulfide (A43) Hydrogen Sulfide (A44) Hydrogen Sulfide (A44) Hydrogen Sulfide (A45) Hydrogen Sulfide (A45) Hydrogen Sulfide (A46) Hydrogen Sulfide (A46) Hydrogen Sulfide (A47) Hydrogen Sulfi
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1) Histosol (A2) Histic Epipedon (A2) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Depleted Matrix (F2) Horganic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Huck Presence (A8) (LRR P, T) Depleted Below Dark Surface (A12) Hydrogen Sulface (A12) Horganic Bodies (A61) Hydrogen Sulfide (A41) Hydrogen Sulfide (A43) Hydrogen Sulfide (A44) Hydrogen Sulfide (A44) Hydrogen Sulfide (A45) Hydrogen Sulfide (A45) Hydrogen Sulfide (A46) Hydrogen Sulfide (A46) Hydrogen Sulfide (A47) Hydrogen Sulfi
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1) Histosol (A2) Histic Epipedon (A2) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Depleted Matrix (F2) Horganic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Huck Presence (A8) (LRR P, T) Depleted Below Dark Surface (A12) Hydrogen Sulface (A12) Horganic Bodies (A61) Hydrogen Sulfide (A41) Hydrogen Sulfide (A43) Hydrogen Sulfide (A44) Hydrogen Sulfide (A44) Hydrogen Sulfide (A45) Hydrogen Sulfide (A45) Hydrogen Sulfide (A46) Hydrogen Sulfide (A46) Hydrogen Sulfide (A47) Hydrogen Sulfi
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1) Histosol (A2) Histic Epipedon (A2) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Depleted Matrix (F2) Horganic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Huck Presence (A8) (LRR P, T) Depleted Below Dark Surface (A12) Hydrogen Sulface (A12) Horganic Bodies (A61) Hydrogen Sulfide (A41) Hydrogen Sulfide (A43) Hydrogen Sulfide (A44) Hydrogen Sulfide (A44) Hydrogen Sulfide (A45) Hydrogen Sulfide (A45) Hydrogen Sulfide (A46) Hydrogen Sulfide (A46) Hydrogen Sulfide (A47) Hydrogen Sulfi
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1) Histosol (A2) Histic Epipedon (A2) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Depleted Matrix (F2) Horganic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR P, T, U) Huck Presence (A8) (LRR P, T) Depleted Below Dark Surface (A12) Hydrogen Sulface (A12) Horganic Bodies (A61) Hydrogen Sulfide (A41) Hydrogen Sulfide (A43) Hydrogen Sulfide (A44) Hydrogen Sulfide (A44) Hydrogen Sulfide (A45) Hydrogen Sulfide (A45) Hydrogen Sulfide (A46) Hydrogen Sulfide (A46) Hydrogen Sulfide (A47) Hydrogen Sulfi
Histosol (A1) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Muck Presence (A8) (LRR U) The Muck (A9) (LRR P, T) Depleted Dark Surface (F8) Marl (F10) (LRR U) Depleted Dark Surface (F8) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12)  Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) 1 cm Muck (A9) (LRR O) 1 cm Muck (A10) (LRR O) Reduced Vertic (F18) (outside MLRA 150A,B)
Histic Epipedon (A2)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Muck Presence (A8) (LRR U)  1 cm Muck (A9) (LRR P, T)  Depleted Below Dark Surface (A12)  Thin Dark Surface (S9) (LRR S, T, U)  Loamy Mucky Mineral (F1) (LRR O)  Loamy Mucky Mineral (F1) (LRR O)  Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Redox Dark Surface (F7)  Redox Dark Surface (F7)  Redox Depressions (F8)  Very Shallow Dark Surface (TF12)  Other (Explain in Remarks)  January (A10) (LRR S)  Reduced Vertic (F18) (outside MLRA 150A,B)  Reduced Vertic (F18)
□ Black Histic (A3)       □ Loamy Mucky Mineral (F1) (LRR O)       □ Reduced Vertic (F18) (outside MLRA 150A,B)         □ Hydrogen Sulfide (A4)       □ Loamy Gleyed Matrix (F2)       □ Piedmont Floodplain Soils (F19) (LRR P, S, T)         □ Stratified Layers (A5)       □ Depleted Matrix (F3)       □ Anomalous Bright Loamy Soils (F20)         □ Organic Bodies (A6) (LRR P, T, U)       □ Redox Dark Surface (F6)       (MLRA 153B)         □ Stratified Layers (A5)       □ Depleted Dark Surface (F7)       □ Red Parent Material (TF2)         □ Muck Wineral (A7) (LRR U)       □ Redox Depressions (F8)       □ Very Shallow Dark Surface (TF12)         □ 1 cm Muck (A9) (LRR P, T)       □ Marl (F10) (LRR U)       □ Other (Explain in Remarks)         □ Depleted Below Dark Surface (A11)       □ Depleted Ochric (F11) (MLRA 151)         □ Thick Dark Surface (A12)       □ Iron-Manganese Masses (F12) (LRR O, P, T)
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Thick Dark Surface (A12)  Depleted Matrix (F3) Redox Dark Surface (F6) MRRA 153B) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
Organic Bodies (A6) (LRR P, T, U)  ☐ Redox Dark Surface (F6) ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U) ☐ Depleted Dark Surface (F7) ☐ Muck Presence (A8) (LRR U) ☐ 1 cm Muck (A9) (LRR P, T) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Iron-Manganese Masses (F12) (LRR O, P, T) ☐ Indicators of hydrophytic vegetation and
5 cm Mucky Mineral (A7) (LRR P, T, U)
Muck Presence (A8) (LRR U)  1 cm Muck (A9) (LRR P, T)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Redox Depressions (F8)  Wery Shallow Dark Surface (TF12)  Other (Explain in Remarks)  Depleted Fig. (F11) (MLRA 151)  Iron-Manganese Masses (F12) (LRR O, P, T)  Iron-Manganese Masses (F12) (LRR O, P, T)
1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12)  Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T)  Other (Explain in Remarks)  Depleted ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T)
Thick Dark Surface (A12)  Iron-Manganese Masses (F12) (LRR O, P, T)  Indicators of hydrophytic vegetation and
L. I. Coget Drairio Dodov (A16) (MI DA 150A). L. I. Ilmbrio Surface (E12) (LDD D. T. II)
Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) wetland hydrology must be present,
☐ Sandy Mucky Mineral (S1) (LRR O, S) ☐ Delta Ochric (F17) (MLRA 151) unless disturbed or problematic. ☐ Sandy Gleyed Matrix (S4) ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
Sandy Redox (S5)  Piedmont Floodplain Soils (F19) (MLRA 149A)
Stripped Matrix (S6)  Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
Dark Surface (S7) (LRR P, S, T, U)
Restrictive Layer (if observed):
Type:  Depth (inches):
Site fails to meet hydric soil criteria.
·

Project/Site: Bryant Parkway Alternative B	City/County: Bryant / Saline	Sampling Date: 10/5/2018
Applicant/Owner: City of Bryant	State: AR	Sampling Point: DP 12
Investigator(s): Cassie Schmidt	Section, Township, Range: Sec 26, T1S	, R14W
Landform (hillslone, terrace, etc.). wooded area near small creek	Local relief (concave, convey, none). no	one Slone (%). 2
Subregion (LRR or MLRA): Lat: 34.610	.539 Long: -92.476842	Datum: NAD83
Soil Map Unit Name: 29 - Tiak silt loam, 3-8% slopes	NWI	classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of ye		
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumst:	ances" present?   Yes_X   No
Are Vegetation, Soil, or Hydrology naturally pr		y answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, trar	nsects, important features, etc.
Hydrophytic Vegetation Present?  Yes No X  Hydric Soil Present?  Yes No X		V
Hydric Soil Present?         Yes	within a Wetland?	es No <sup>X</sup>
Remarks:		
Site fails to meet all three wetland criteria.		
LIVEROLOGY		
HYDROLOGY Westland Hydrology Indicators	Sacanda	ry Indicators (minimum of two required)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)		ace Soil Cracks (B6)
Surface Water (A1)  Aquatic Fauna (B1)		rsely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B1:		nage Patterns (B10)
Saturation (A3)  Hydrogen Sulfide		s Trim Lines (B16)
		Season Water Table (C2)
Sediment Deposits (B2) Presence of Redu	ced Iron (C4)	fish Burrows (C8)
Drift Deposits (B3)	ction in Tilled Soils (C6) 🔲 Satu	ration Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	(C7) Geor	morphic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in F		low Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	<del></del>	-Neutral Test (D5)
Water-Stained Leaves (B9)	Spha	agnum moss (D8) <b>(LRR T, U)</b>
Field Observations:  Surface Water Present?  Yes No _X Depth (inches	.).	
Water Table Present? Yes No Depth (inches		
Saturation Present?  Yes No _X Depth (inches		Present? Yes X
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if available:	
Remarks:		
Site meets wetland hydrology criteria.		
and the state of t		

### **VEGETATION (Four Strata)** – Use scientific names of plants.

001!"	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30' radius )		Species?		Number of Dominant Species
1. pignut hickory, Carya glabra	20	<u>Y</u>	FACU	That Are OBL, FACW, or FAC: $\frac{4}{}$ (A)
2. Shumard's oak, Quercus shumardii	30	<u>Y</u>	FAC	Total Number of Dominant
3. white oak, Quercus alba	30	<u>Y</u>	FACU	Species Across All Strata: 9 (B)
4. sweetgum, Liquidambar styraciflua	10	N	FAC	Develop of Development Chapties
5. water oak, Quercus nigra	10	N	FAC	Percent of Dominant Species That Are OBL, FACW, or FAC:  (A/B)
6				
7				Prevalence Index worksheet:
8				Total % Cover of: Multiply by:
	100	= Total Cov	er	OBL species x 1 =
50% of total cover: 50				FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15' radius )		101011 001011		FAC species x 3 =
1. pignut hickory, Carya glabra	10	Υ	FACU	FACU species x 4 =
2. American beautyberry, Callicarpa americana	30	Y	FACU	UPL species x 5 =
3. eastern redcedar, Juniperus virginiana	5		FACU	Column Totals: (A) (B)
	· <u> </u>			
4				Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
8				☐ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
	45	= Total Cov	er	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover: 22.5	20% of	total cover:	9	, , , , , , , , , , , , , , , , , , , ,
Herb Stratum (Plot size: 5' radius )				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1. eastern poison ivy, Toxicodendron radicans	10	Υ	FAC	be present, unless disturbed or problematic.
2 slender woodoats, Chasmanthium laxum	40	Υ	FACW	Definitions of Four Vegetation Strata:
3.				_
4				<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
_				height.
6				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
7				than 3 in. DBH and greater than 3.20 it (1 iii) tall.
8				Herb – All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10				Woody vine – All woody vines greater than 3.28 ft in
11				height.
12				
	50	= Total Cov	er	
50% of total cover: 25	20% of	total cover:	10	
Woody Vine Stratum (Plot size: 30' radius )				
1 Japanese honeysuckle, Lonicera japonica	5	Υ	FACU	
2. roundleaf greenbrier, Smilax rotundifolia	5	Υ	FAC	
3.				
4				
	· ——			
5	10			Hydrophytic
5		= Total Cov		Vegetation Present? Yes No _X
	20% of	total cover:		
Remarks: (If observed, list morphological adaptations below	ow).			
Site fails to meet hydrophytic vegetation	n criteria	<b>l</b> .		
, , ,				

		to the dept	h needed to docun			or confirm	the absence	of indicators.)	
Depth (inches)	Matrix Color (moist)	<u></u> %	Redox Color (moist)	<u>x Features</u> %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Re	emarks
0-4	10 YR 4/3	100	Color (molec)	70	1,700		TOXIGIO	silt loam	marko
4-8	10 YR 6/3	50						silt loam	
	10 YR 5/6	50						silt loam; may be re-	dox features or mixed soils
8-18	10 YR 6/2	20						silt loam	
	10 YR 5/6	80							rs to be mixed soils
	10 111 0/0							on loam, appears	3 to be mixed 30113
			Reduced Matrix, MS .RRs, unless other			ains.		PL=Pore Lining, for Problematic	
Histosol		Sable to all L	Polyvalue Be		•	DD C T II		Juck (A9) (LRR O	-
_	oipedon (A2)		Thin Dark Su					Muck (A9) <b>(LRR 5</b> Muck (A10) <b>(LRR 5</b>	
Black His			Loamy Mucky						outside MLRA 150A,B)
	n Sulfide (A4)		Loamy Gleye			-,			ils (F19) <b>(LRR P, S, T)</b>
Stratified	Layers (A5)		Depleted Mat	rix (F3)	•		Anoma	alous Bright Loam	y Soils (F20)
Organic	Bodies (A6) (LRR F	P, T, U)	Redox Dark S	Surface (F	6)		1 1 -	RA 153B)	
=	cky Mineral (A7) <b>(L</b>		Depleted Dar					arent Material (TF	*
=	esence (A8) (LRR I	J)	Redox Depre		3)			Shallow Dark Surfa	, ,
_	ck (A9) (LRR P, T)	(011)	Marl (F10) (L	-	MIDA 4	-4\	U Other	(Explain in Remar	ks)
= '	l Below Dark Surfac ark Surface (A12)	ce (ATT)	Depleted Och		-	-	T) <sup>3</sup> India	ators of hydrophy	tic vegetation and
=	rairie Redox (A16) <b>(</b>	MI RA 150A	=		, ,,			tland hydrology mi	=
=	lucky Mineral (S1) (		Delta Ochric	, , ,		, ,		ess disturbed or p	· ·
=	leyed Matrix (S4)	, ,	Reduced Ver	. , .	•	0A, 150B)		•	
=	edox (S5)		Piedmont Flo	odplain So	oils (F19)	(MLRA 14	9A)		
Stripped	Matrix (S6)		Anomalous B	right Loan	ny Soils (F	20) <b>(MLR</b>	A 149A, 153C	, 153D)	
	face (S7) (LRR P,	-					1		
_	_ayer (if observed)	):							
Type:							11	D 10 V	No X
Depth (inc	ones):						Hydric Soil	Present? Yes	No <u>^</u>
Remarks: Si	ite fails to me	et hydric	soil criteria.						
		,							

Project/Site: Bryant Parkway Alt	ernative B	City/C	ounty: Bryant / S	Saline	Sampling Date: 10/5/2018
Applicant/Owner: City of Bryant				State: AR	Sampling Point: DP 13
Investigator(s): Cassie Schmidt		Section		ange: Sec 26, T1S, R14W	
Landform (hillslone terrace etc.	). forested wetland	Local	relief (concave	convex none). none	Slone (%). 0
Subregion (LRR or MLRA):	•	Lat: <sup>34.609277</sup>	•	Long: -92.476149	Datum: NAD83
Subregion (LRR or MLRA):  Soil Map Unit Name: 3 - Amy sil	t loam, 0-1% slopes, free	quently flooded		NWI classific	cation: N/A
Are climatic / hydrologic condition					
					oresent? Yes X No
Are Vegetation, Soil				eeded, explain any answe	
					s, important features, etc.
		<u> </u>		,	<u> </u>
Hydrophytic Vegetation Preser		. No	Is the Sample		
Hydric Soil Present? Wetland Hydrology Present?	Yes X	No	within a Wetla	nd? Yes X	No
Remarks:					
Site meets all three v	wetland criteria.				
HYDROLOGY					
Wetland Hydrology Indicator		-11 4b -4 b A			ators (minimum of two required)
Primary Indicators (minimum o				Surface Soil	
Surface Water (A1)		atic Fauna (B13) Deposits (B15) <b>(LRF</b>	<b>.</b> 11/		getated Concave Surface (B8)
High Water Table (A2) Saturation (A3)		rogen Sulfide Odor (C	=	<u>Ľ</u> Drainage Pa ☐ Moss Trim L	
Water Marks (B1)		lized Rhizospheres al			Water Table (C2)
Sediment Deposits (B2)		sence of Reduced Iron		Crayfish Bur	
Drift Deposits (B3)		ent Iron Reduction in	, ,		isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Muck Surface (C7)			Position (D2)
Iron Deposits (B5)		er (Explain in Remark	s)	Shallow Aqu	itard (D3)
Inundation Visible on Aeria			,	FAC-Neutral	Test (D5)
Water-Stained Leaves (B9	9)			☐ Sphagnum n	moss (D8) <b>(LRR T, U)</b>
Field Observations:		0.04	F."		
Surface Water Present?	Yes X No		5"		
Water Table Present?	Yes <u>X</u> No				V
Saturation Present? (includes capillary fringe)	Yes X No	Depth (inches): surra	W	etland Hydrology Preser	nt? Yes <sup>X</sup> No
Describe Recorded Data (stream	am gauge, monitoring we	ell, aerial photos, prev	vious inspections	s), if available:	
Domosko					
Remarks: Site meets wetland h	ydrology critoric	•			
Site meets wetland	lydrology chieria	l.			
Surface water only p	rocont in a fow I	ocations as n	ıddlos		
Surface water only p	resent in a lew i	ocalions as pu	iddles.		
					!

### **VEGETATION** (Four Strata) – Use scientific names of plants.

200 vadius		Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30' radius )		Species?		Number of Dominant Species
1. black willow, Salix nigra	10	N	OBL	That Are OBL, FACW, or FAC: $\frac{7}{}$ (A)
2. pignut hickory, Carya glabra	30	Y	FACU	Total Number of Dominant
3. sweetgum, Liquidambar styraciflua	20	<u>Y</u>	FAC	Species Across All Strata: 8 (B)
4. Shumard's oak, Quercus shumardii	10	N	FAC	Percent of Dominant Species
5. green ash, Fraxinus pennsylvanica	30	Υ	FACW	That Are OBL, FACW, or FAC: 88 (A/B)
6				Burnelon as la deconsulado de
7				Prevalence Index worksheet:
8				Total % Cover of: Multiply by:
	100	= Total Cov	er	OBL species x 1 =
50% of total cover: 50	20% of	total cover:	20	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15' radius )				FAC species x 3 =
1 sweetgum, Liquidambar styraciflua	10	Υ	FAC	FACU species x 4 =
2. American elm, Ulmus americana	10	Y	FAC	UPL species x 5 =
3. Chinese privet, Ligustrum sinense	10	Υ	FAC	Column Totals: (A) (B)
4				Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
8.	· •			3 - Prevalence Index is ≤3.0 <sup>1</sup>
	30	= Total Cov	er	1 <b>=</b>
50% of total cover: 15				Problematic Hydrophytic Vegetation¹ (Explain)
Herb Stratum (Plot size: 5' radius )		10101.		1
1 Virginia dayflower, Commelina virginica	20	Υ	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2 smartweed, Persicaria sp.*	10	Y	OBL	Definitions of Four Vegetation Strata:
3.				
4				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
_				more in diameter at breast height (DBH), regardless of height.
6				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
7				than o m. BBT and groater than o.20 ft (1 m) tail.
8				Herb – All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10				Woody vine - All woody vines greater than 3.28 ft in
11				height.
12				
		= Total Cov		
50% of total cover: 15	20% of	total cover:	6	
Woody Vine Stratum (Plot size:)				
1				
2. None Observed				
3				
4				
5.				Hydrophytic
		Total Cov	er	Vegetation
50% of total cover:				Present? Yes X No
Remarks: (If observed, list morphological adaptations belo				

Site meets hydrophytic vegetation criteria.

\*Of the 14 species of Persicaria listed in Arkansas for the AGCP Region, all are FAC or wetter, with the majority (50%) being OBL.

		to the dep	th needed to docun			or confirm	the absence	of indicators.)	
Depth (inches)	Matrix Color (moist)	%	Color (moist)	<u>x Feature</u> %	es Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remark	(9
0-6	10 YR 4/2	85	7.5 YR 4/6	15	C	M	TOXIGIO	silty clay loam	
6-18	10 YR 5/2	75	7.5 YR 4/6	25				silty clay loam	
					- —	····			
					-	. ———			
<sup>1</sup> Type: C=Cc	ncentration, D=Dep	oletion, RM:	Reduced Matrix, MS	S=Maske	d Sand Gr	ains.	<sup>2</sup> Location:	PL=Pore Lining, M=M	atrix.
Hydric Soil I	ndicators: (Applic	able to all	LRRs, unless other	wise not	ted.)		Indicators	for Problematic Hydr	ric Soils³:
Histosol			Polyvalue Be					Muck (A9) (LRR O)	
	ipedon (A2)		Thin Dark Su				1 1	Muck (A10) (LRR S)	I- MI DA 450A D)
Black His	stic (A3) n Sulfide (A4)		Loamy Mucky Loamy Gleye			k ()		ed Vertic (F18) <b>(outsic</b> ont Floodplain Soils (F	· ·
	Layers (A5)		Depleted Mat		(1 2)			alous Bright Loamy Soi	, ,
	Bodies (A6) (LRR F	P, T, U)	Redox Dark S	, ,	F6)			RA 153B)	(* = *)
5 cm Mu	cky Mineral (A7) <b>(L</b> l	RR P, T, U)	Depleted Dar	k Surface	e (F7)			arent Material (TF2)	
=	esence (A8) (LRR L	J)	Redox Depre		<del>-</del> 8)			Shallow Dark Surface (1	ΓF12)
	ck (A9) <b>(LRR P, T)</b> l Below Dark Surfac	·ο (Λ11)	☐ Marl (F10) <b>(L</b> ☐ Depleted Och		/MI DA 1	51)	U Other	(Explain in Remarks)	
=	rk Surface (A12)	Æ (ATT)	Iron-Mangane		-	-	T) <sup>3</sup> Indic	cators of hydrophytic ve	egetation and
=	airie Redox (A16) (	MLRA 150	=			-	•	tland hydrology must be	•
=	ucky Mineral (S1) (	LRR O, S)	Delta Ochric		-			ess disturbed or proble	matic.
=	leyed Matrix (S4)		Reduced Ver		-	-			
_	edox (S5) Matrix (S6)		Piedmont Flo				.9A) A 149A, 153C	· 153D)	
= ::	face (S7) <b>(LRR P, \$</b>	S. T. U)	<u> </u>	ingni Loa	iiiy Solis (	1 20) (WILK	A 149A, 133C	, 1330)	
	ayer (if observed)	-							
Type:									
Depth (inc	ches):						Hydric Soil	Present? Yes X	No
Remarks: Ci	te meets hyd	ric soil a	ritoria						
Oi	te meets nyd	ilic soli i	Jillella.						

Project/Site: Bryant Parkway Alternative B City/	/County: Bryant / Saline	Sampling Date: 10/5/2018
Applicant/Owner: City of Bryant	State: AR	Sampling Point: DP 14
Investigator(s): Cassie Schmidt Sec	tion, Township, Range: Sec 26, T1S, R14W	
Landform (hillslope, terrace, etc.): wooded area near creek	al relief (concave, convex, none): none	Slope (%): <sup>3</sup>
Subregion (LRR or MLRA): Lat: 34.608284	Long: -92.475373	Datum: NAD83
Soil Map Unit Name: 22 - Savannah fine sandy loam, 3-8% slopes	NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year?		
Are Vegetation, Soil, or Hydrology significantly distu		
Are Vegetation, Soil, or Hydrology naturally problem		
SUMMARY OF FINDINGS – Attach site map showing sa		
		<u>, , , , , , , , , , , , , , , , , , , </u>
Hydrophytic Vegetation Present?  Yes No _X	Is the Sampled Area	
Hydric Soil Present?         Yes	within a Wetland? Yes	No X
Remarks:		
Site fails to meet all three wetland criteria.		
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil	Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13)	<del>-</del> ' '	getated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15) (LF		
Saturation (A3)  Hydrogen Sulfide Odor  Ovidinal Phizophores		
☐       Water Marks (B1)       ☐       Oxidized Rhizospheres         ☐       Sediment Deposits (B2)       ☐       Presence of Reduced In	· · · · · · · · · · · · · · · · · · ·	Water Table (C2)
Drift Deposits (B3)  Recent Iron Reduction i	<del>-</del>	isible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface (C7)		Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in Rema	rks) 🔲 Shallow Aqui	tard (D3)
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral	Test (D5)
Water-Stained Leaves (B9)	☐ Sphagnum m	noss (D8) <b>(LRR T, U)</b>
Field Observations:  Surface Water Present?  Yes No X Depth (inches):		
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes Depth (inches): Street No Depth (inches): No Depth (inches): No	<del></del> 8"	
Saturation Present? Yes No Depth (inches):		nt? Yes No <sup>X</sup>
(includes capillary fringe)		t: 1es No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	evious inspections), if available:	
Remarks:		
Site fails to meet wetland hydrology criteria.		
, ,,		

### **VEGETATION (Four Strata)** – Use scientific names of plants.

201 radius		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30' radius )		Species?		Number of Dominant Species
1. pignut hickory, Carya glabra		<u>Y</u>	FACU	That Are OBL, FACW, or FAC: 2 (A)
2. American elm, Ulmus americana	_ 5	N	FAC	Total Number of Dominant
3. Ioblolly pine, Pinus taeda	50	<u>Y</u>	FAC	Species Across All Strata: 5 (B)
4. sweetgum, Liquidambar styraciflua	5	N	FAC	Percent of Dominant Species
5water oak, Quercus nigra	10	N	FAC	That Are OBL, FACW, or FAC: 40 (A/I
3				
7. <u> </u>				Prevalence Index worksheet:
3				Total % Cover of: Multiply by:
	100	= Total Cov	/er	OBL species x 1 =
50% of total cover: <sup>50</sup>				FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15' radius )	20 70 01	10101 00101	· ——	FAC species x 3 =
white oak, Quercus alba	5	Υ	FACU	FACU species x 4 =
American beautyberry, Callicarpa americana	5	<u> </u>	FACU	UPL species x 5 =
				Column Totals: (A) (B
3.				
l				Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
S		-		1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
3				3 - Prevalence Index is ≤3.0 <sup>1</sup>
	10	= Total Cov	/er	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover: 5	20% of	total cover	. 2	<u>—</u> · · · · · · · · · · · · · · · · · · ·
Herb Stratum (Plot size: 5' radius )				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
eastern poison ivy, Toxicodendron radicans	5	Υ	FAC	be present, unless disturbed or problematic.
2				Definitions of Four Vegetation Strata:
				Johnson Grand Togotanon Grand
3				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
1				more in diameter at breast height (DBH), regardless of height.
5				
5				Sapling/Shrub – Woody plants, excluding vines, less
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
3				Herb - All herbaceous (non-woody) plants, regardles
9				of size, and woody plants less than 3.28 ft tall.
10				Woody vine – All woody vines greater than 3.28 ft in
l1				height.
2				
	5	= Total Cov	/er	
50% of total cover: 2.5	20% of	total cover	. 1	
Noody Vine Stratum (Plot size:)	<del></del>			
).				
None observed				
3				
1				
5				Hydrophytic
		= Total Cov		Vegetation   Present?   Yes No X
		total cover		rieseit: iesiio
50% of total cover:	20% of	total cover	•——	

Profile Desc	cription: (Describe	to the depti	n needed to docur	nent the indi	cator or confirm	the absence	of indicate	ors.)	
Depth	Matrix			x Features					
(inches)	Color (moist)		Color (moist)	<u>%</u> <u>T</u>	ype <sup>1</sup> Loc <sup>2</sup>	Texture		Remarks	
0-6	10 YR 4/2	100					silt loam		
6-20	10 YR 5/3	100					silt loam		
									_
	-			· — — —					
									_
	-			· —— —					
	oncentration, D=De				nd Grains.			ining, M=Mat	
Hydric Soil	Indicators: (Appli	cable to all L	RRs, unless other	rwise noted.)		Indicators	for Proble	matic Hydric	Soils <sup>3</sup> :
☐ Histosol			Polyvalue Be	low Surface (	88) <b>(LRR S, T, U</b>	J) <u> </u>	/luck (A9) <b>(I</b>	LRR O)	
☐ Histic Ep	oipedon (A2)		Thin Dark Sເ	ırface (S9) <b>(LF</b>	RR S, T, U)	2 cm N	/luck (A10)	(LRR S)	
Black Hi			=	y Mineral (F1)	(LRR O)				MLRA 150A,B)
_	en Sulfide (A4)		=	ed Matrix (F2)			-		) (LRR P, S, T)
	d Layers (A5)		Depleted Ma	• •		·	-	Loamy Soils	(F20)
	Bodies (A6) (LRR I		Redox Dark				RA 153B)	· L (TEO)	
	icky Mineral (A7) <b>(L</b>			rk Surface (F7	)		arent Mater		40)
_	esence (A8) (LRR I	•	Redox Depre	` '			na⊪ow ⊔ar (Explain in	k Surface (TF	12)
	ick (A9) <b>(LRR P, T)</b> d Below Dark Surfa		Marl (F10) (L	. <b>r.k. u)</b> hric (F11) <b>(ML</b>	DA 151)	U Other	(⊏xpiairi iri	Remarks)	
	ark Surface (A12)	Se (ATT)	_		F12) (LRR O, P,	T) <sup>3</sup> Indic	ators of hy	drophytic vege	atation and
=	rairie Redox (A16) <b>(</b>	MI RA 150A)	=	ice (F13) <b>(LRF</b>		•	-	ogy must be p	
_	lucky Mineral (S1) (		_	(F17) <b>(MLRA</b>	· · · · · · · · · · · · · · · · · · ·		-	ed or problem	
=	Gleyed Matrix (S4)	(			RA 150A, 150B)			54 0. p. 05/6	
=	Redox (S5)				(F19) <b>(MLRA 14</b>				
	Matrix (S6)		_	•	Soils (F20) (MLR	•	, 153D)		
= ::	rface (S7) (LRR P,	S, T, U)		o ,	, , ,	•	,		
Restrictive I	Layer (if observed)	):							
Type:									
Depth (inc	ches):					Hydric Soil	Present?	Yes	No X
Damanira.						1			
S Remarks.	ite fails to me	et hydric	soil criteria.						
		•							

Project/Site: Bryant Parkway Alternative B	City/County: Bryant / Saline	Sampling Date: 10/5/2018
Applicant/Owner: City of Bryant	State: AR	Sampling Point: DP 15
Investigator(s): Cassie Schmidt	Section, Township, Range: Sec 26, T1S, F	
Landform (hillslope, terrace, etc.): wooded area		
Subregion (LRR or MLRA): Lat: 34.608	136 Long: -92.474417	Datum: NAD83
Subregion (LRR or MLRA): Lat: 34.608 Soil Map Unit Name: 22 - Savannah fine sandy loam, 3-8% slopes	NWI cl	assification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year		
Are Vegetation, Soil, or Hydrology significantly		
Are Vegetation, Soil, or Hydrology naturally pr		
SUMMARY OF FINDINGS – Attach site map showing		
	<u> </u>	<u> </u>
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area	
Hydric Soil Present?         Yes	within a Wetland? Yes	No X
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:		Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		e Soil Cracks (B6)
Surface Water (A1) High Water Table (A2) Aquatic Fauna (B1) Marl Deposits (B15)		ely Vegetated Concave Surface (B8) ge Patterns (B10)
Saturation (A3)  Hydrogen Sulfide (Carlotte (A2))  Hydrogen Sulfide (Carlotte (A2))		Trim Lines (B16)
		eason Water Table (C2)
Sediment Deposits (B2)	ced Iron (C4)	sh Burrows (C8)
	` '	tion Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	· · · =	orphic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in F		w Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)		leutral Test (D5) num moss (D8) <b>(LRR T, U)</b>
Field Observations:		(25) (2111 1, 5)
Surface Water Present? Yes No X Depth (inches	):	
Water Table Present? Yes No X Depth (inches	): <u>&gt;18"</u>	
Saturation Present? Yes No X Depth (inches	): >18" Wetland Hydrology P	Present? Yes No X
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photo	l os, previous inspections), if available:	
Remarks:		
Site fails to meet wetland hydrology criteria.		

### **VEGETATION** (Four Strata) – Use scientific names of plants.

001		Dominant		Dominance Test worksheet:	
<u>Tree Stratum</u> (Plot size: 30' radius )		Species?		Number of Dominant Species	
1. pignut hickory, Carya glabra	20	<u>Y</u> Y	FACU	That Are OBL, FACW, or FAC: 5	(A)
2. red maple, Acer rubrum	20	Y	FAC	Total Number of Dominant	
3. loblolly pine, Pinus taeda	30		FAC	Species Across All Strata: 7	(B)
4. sweetgum, Liquidambar styraciflua	20	<u>Y</u>	FAC	Percent of Dominant Species	
5. white oak, Quercus alba	10	<u>N</u>	FACU	That Are OBL, FACW, or FAC:	(A/B)
6				Prevalence Index worksheet:	
7	· ——				
8				Total % Cover of: Multiply by: OBL species x 1 =	_
	100	= Total Cov	er	·	
50% of total cover: 50	20% of	total cover:	20	FACW species x 2 =	
Sapling/Shrub Stratum (Plot size: 15' radius )				FAC species x 3 =	
1. sweetgum, Liquidambar styraciflua	10	Υ	FAC	FACU species x 4 =	
2. coralberry, Symphoricarpos orbiculatus	10	Υ	FACU	UPL species x 5 =	
3				Column Totals: (A)	_ (B)
4.				Prevalence Index = B/A =	
5.				Hydrophytic Vegetation Indicators:	_
6.				1 - Rapid Test for Hydrophytic Vegetation	
7.					
8.	· ——			青	
o	20	= Total Cov	or	3 - Prevalence Index is ≤3.0¹	
50% of total cover: 10				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain	1)
	20 /6 01	total cover.			
Herb Stratum (Plot size:)				<sup>1</sup> Indicators of hydric soil and wetland hydrology m be present, unless disturbed or problematic.	nust
1					
				Definitions of Four Vegetation Strata:	
3				Tree – Woody plants, excluding vines, 3 in. (7.6 c	
4				more in diameter at breast height (DBH), regardle height.	ess of
5				neight.	
6				Sapling/Shrub – Woody plants, excluding vines,	
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
8				Herb - All herbaceous (non-woody) plants, regar	dless
9				of size, and woody plants less than 3.28 ft tall.	
10				Woody vine – All woody vines greater than 3.28	ft in
11				height.	
12.					
		= Total Cov	er		
50% of total cover:	20% of	total cover:			
Woody Vine Stratum (Plot size: 30' radius )					
1. grape, Vitis sp.*	10	Υ	FAC		
2.					
3.					
4					
5.	· ——				
o	10	= Total Cov		Hydrophytic Vegetation	
50% of total cover: <sup>5</sup>				Present? Yes X No	
50% of total cover:	ZU% Of	iolai cover:			

Remarks: (If observed, list morphological adaptations below).

Site meets hydrophytic vegetation criteria.

Pine needles and shade preventing herbaceous growth.

\*Of the 7 species of Vitis listed in Arkansas for the AGCP Region, the majority (71%) are FAC or wetter, with the most species being FAC.

		to the dept	n needed to docun			or confirm	the absence	of indicators.)	1	
Depth (inches)	Matrix Color (moist)	<del></del> -	Redox Color (moist)	<u>k Features</u> %	_Type <sup>1</sup> _	Loc <sup>2</sup>	Texture		Remarks	
0-4	10 YR 3/2	100	Color (moist)		Туре		Texture	silt loam	INGIIIAINS	
4-18	10 YR 4/3	100						sandy loam		
<del>- 10</del>	10 111 4/0							Sandy Ioani		
1 <sub>Type:</sub> C=Ce	naontration D-Day	 alatian DM-I	Reduced Matrix, MS	`-Maakad	Sand Cr		2l continu	PL=Pore Lining	a M-Motriy	
			RRs, unless other			airis.		for Problemat	<u> </u>	3.
Histosol			Polyvalue Be			RR S. T. U		Лиск (A9) <b>(LRR</b>	-	
	ipedon (A2)		Thin Dark Su					лиск (ле) <b>(LR</b> I		
Black His			Loamy Mucky					ed Vertic (F18)		A 150A,B)
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix (F	<sup>-</sup> 2)		Piedm	ont Floodplain S	Soils (F19) <b>(LR</b>	R P, S, T)
=	Layers (A5)		Depleted Mat	, ,				alous Bright Loa	my Soils (F20)	
=	Bodies (A6) (LRR F		Redox Dark S		,			RA 153B)	TEO)	
	cky Mineral (A7) <b>(L</b> esence (A8) <b>(LRR l</b>		Depleted Dar Redox Depre					arent Material (ʾ Shallow Dark Su	,	
_	ck (A9) <b>(LRR P, T)</b>	,	Marl (F10) (L		"			(Explain in Rem		
_	Below Dark Surfac	ce (A11)	Depleted Och		MLRA 15	51)		(=/p/s//////////////////////////////////		
Thick Da	rk Surface (A12)	. ,	Iron-Mangane			-	T) <sup>3</sup> Indic	ators of hydrop	hytic vegetatio	n and
. Coast Pr	airie Redox (A16) <b>(</b>	MLRA 150A	) 🔲 Umbric Surfa	ce (F13) <b>(</b> I	LRR P, T	, U)	wet	land hydrology	must be prese	nt,
=	ucky Mineral (S1) (	LRR O, S)	Delta Ochric		-			ess disturbed o	r problematic.	
=	leyed Matrix (S4)		Reduced Ver			-				
_	edox (S5) Matrix (S6)		Piedmont Flo				9A) A 149A, 153C	153D)		
=	face (S7) <b>(LRR P</b> ,	S. T. U)	<u> </u>	ngni Loan	iy Solis (i	20) (WILK	A 143A, 133C	, 1330)		
	.ayer (if observed)	-								
Type:										
Depth (inc	ches):						Hydric Soil	Present? Yo	esN	о_X
Remarks:										
Si	te fails to me	et nyaria	soli criteria.							

Project/Site: Bryant Parkway Alternative B Cit	ty/County: Bryant / Saline	Sampling Date: 10/5/2018
Applicant/Owner: City of Bryant		Sampling Point: DP 16
	ection, Township, Range: Sec 26, T1S, R14W	
Landform (hillslope, terrace, etc.): forested wetland Lo	cal relief (concave, convex, none): none	Slope (%); 0
Subregion (LRR or MLRA): Lat: 34.608383	3 Long: -92.474618	Datum: NAD83
Soil Map Unit Name: 22 - Savannah fine sandy loam, 3-8% slopes	NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year'		
Are Vegetation, Soil, or Hydrology significantly dis		
Are Vegetation, Soil, or Hydrology naturally proble	·	
SUMMARY OF FINDINGS – Attach site map showing s	, , , , , ,	,
		, important leatures, etc.
Hydrophytic Vegetation Present?  Yes X  No	Is the Sampled Area	
Hydric Soil Present?  Yes X No	within a Wetland? Yes X	No
Wetland Hydrology Present?  Yes X  No N		
Site meets all three wetland criteria.		
one mode an imos wenting ontona.		
HYDROLOGY		
Wetland Hydrology Indicators:		tors (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		` '
Surface Water (A1)  Aquatic Fauna (B13)  Add Barrasite (D45) (1		jetated Concave Surface (B8)
High Water Table (A2) Saturation (A3)  High Water Table (A2) Hydrogen Sulfide Odd		
		Water Table (C2)
Sediment Deposits (B2)  Presence of Reduced		· ·
Drift Deposits (B3)	n in Tilled Soils (C6)	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Geomorphic Geomorphic	Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in Rem	· ·	
Inundation Visible on Aerial Imagery (B7)	☐ FAC-Neutral	` '
Water-Stained Leaves (B9)  Field Observations:	Spnagnum m	oss (D8) <b>(LRR T, U)</b>
Surface Water Present? Yes No X Depth (inches): _		
Water Table Present?  Yes No _X Depth (inches): _2		
Saturation Present?  Yes No X Depth (inches): 2		t? Yes <sup>X</sup> No
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	previous inspections), if available:	
Remarks:		
Site meets wetland hydrology criteria.		

### **VEGETATION (Four Strata)** – Use scientific names of plants.

001	Absolute	Dominant	Indicator	Dominance Test worksheet:	
<u>Tree Stratum</u> (Plot size: 30' radius )		Species?		Number of Dominant Species	
1. American elm, Ulmus americana	20	<u>Y</u>	FAC	That Are OBL, FACW, or FAC: 6 (A	')
2. Ioblolly pine, Pinus taeda	30	Υ	FAC	Total Number of Dominant	
3. sweetgum, Liquidambar styraciflua	30	<u>Y</u>	FAC	Species Across All Strata: 6 (B	()
4. water oak, Quercus nigra	20	Υ	FAC		, l
5				Percent of Dominant Species That Are OBL, FACW, or FAC:  (A.	/B)
6				That Are OBL, FACW, or FAC (A	<i>,</i> D)
				Prevalence Index worksheet:	$\neg$
7				Total % Cover of: Multiply by:	
8	400			OBL species x 1 =	
50		= Total Cov		FACW species x 2 =	
50% of total cover: 50	20% of	total cover:	20	FAC species x 3 =	
Sapling/Shrub Stratum (Plot size: 15' radius )					
1. American elm, Ulmus americana	10	<u>Y</u>	FAC	FACU species x 4 =	
2				UPL species x 5 =	
3				Column Totals: (A) (I	B)
4				Prevalence Index = B/A =	
5					
				Hydrophytic Vegetation Indicators:	
6				1 - Rapid Test for Hydrophytic Vegetation	
7				2 - Dominance Test is >50%	
8	40			3 - Prevalence Index is ≤3.0 <sup>1</sup>	
_		= Total Cov		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
50% of total cover: 5	20% of	total cover:	2		
Herb Stratum (Plot size:)  1.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	t
2 None observed				Definitions of Four Vegetation Strata:	
				Deminions of Four Vegetation Strata.	
3				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)	
4				more in diameter at breast height (DBH), regardless height.	of
5				neight.	
6				Sapling/Shrub – Woody plants, excluding vines, les	SS
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
8				Herb – All herbaceous (non-woody) plants, regardle	ss
9				of size, and woody plants less than 3.28 ft tall.	
10				Mandy vine All woody vines greater than 2.29 ft is	n
11.				Woody vine – All woody vines greater than 3.28 ft in height.	i 1
12.					
		= Total Cov			
50% of total cover:					
	20 % 01	total cover.			
Woody Vine Stratum (Plot size: 30' radius )  1 roundleaf greenbrier, Smilax rotundifolia	10	Υ	FAC		
· · ·					
2					
3					
4					
5				Hydrophytic	
	10	= Total Cov	er	Vegetation	
50% of total cover: 5	20% of	total cover:	2	Present? Yes X No No	
Remarks: (If observed, list morphological adaptations bel				. <u>l</u>	$\overline{}$
Site meets hydrophytic vegetation crite	•				
Site meets hydrophytic vegetation chie	IIa.				
		_			
Pine needles and shade preventing he	rbaceou	s growth	า.		

		to the dep	th needed to docum			or confirm	the absence	of indicators.)	
Depth (inches)	Matrix Color (moist)	%	Color (moist)	<u>x Feature</u> %	s Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-4	10 YR 4/2	90	7.5 YR 5/8	10	C	M	TOXIGIO	silt loam	
4-12	10 YR 5/2	80	7.5 YR 5/8	20	C	M		clay loam	
12-18	10 YR 6/2	80	10 YR 5/8	20				sandy loam	_
					- —	· <del>· · · · · · · · · · · · · · · · · · </del>			
		_			-	·			
			=Reduced Matrix, MS			ains		PL=Pore Lining, M=Matrix	
		cable to all	LRRs, unless other		· ·			for Problematic Hydric S	ioils³:
Histosol			Polyvalue Bel					Muck (A9) (LRR O)	
Black His	oipedon (A2)		☐ Thin Dark Sui ☐ Loamy Mucky				1 1	Muck (A10) <b>(LRR S)</b> ed Vertic (F18) <b>(outside M</b>	II PA 150A R)
_	n Sulfide (A4)		Loamy Gleye			(0)		ont Floodplain Soils (F19) <b>(</b>	-
_	Layers (A5)		Depleted Mat		()			alous Bright Loamy Soils (F	
Organic	Bodies (A6) (LRR F	P, T, U)	Redox Dark S	Surface (	F6)		(MLF	RA 153B)	
_	cky Mineral (A7) <b>(L</b>							arent Material (TF2)	
_	esence (A8) (LRR l	J)	Redox Depre		<sup>-</sup> 8)			Shallow Dark Surface (TF12	2)
=	ck (A9) <b>(LRR P, T)</b> d Below Dark Surfac	co (Δ11)	☐ Marl (F10) <b>(L</b> ☐ Depleted Och		/MI PA 1	51)	Utner	(Explain in Remarks)	
	ark Surface (A12)	Se (A11)	Iron-Mangane		-	-	T) <sup>3</sup> Indic	cators of hydrophytic vegeta	ation and
=	rairie Redox (A16) <b>(</b>	MLRA 150	=			=	-	tland hydrology must be pre	
=	lucky Mineral (S1) <b>(</b>	LRR O, S)	Delta Ochric					ess disturbed or problemati	ic.
=	leyed Matrix (S4)		Reduced Veri		-	-			
_	edox (S5)		Piedmont Flo					1520)	
= ::	Matrix (S6) face (S7) <b>(LRR P,</b> 3	S. T. U)	<u> </u>	ngni Loa	iny Sons (	(F20) (IVILK	A 149A, 153C	, 1550)	
	_ayer (if observed)								
Type:									
Depth (inc	ches):						Hydric Soil	Present? Yes X	No
Remarks:	ita maata bua	lrio opil	oritorio						
31	ite meets hyd	ine son	ontena.						

Project/Site: Bryant Parkway Alternative B	City/County: Bryant / Saline	Sampling Date:			
Applicant/Owner: City of Bryant	State: AR	Sampling Point: DP 17			
Investigator(s): Cassie Schmidt	Section, Township, Range: Sec 35, T1S, R14	W			
Landform (hillslope, terrace, etc.): forested wetland  Subregion (LRR or MLRA): Lat: 34.597  Soil Map Unit Name: 23 - Savannah-Urban land complex, 3-8% slopes	Local relief (concave, convex, none): none	Slope (%): <u>0-1</u>			
Subregion (LRR or MLRA): Lat: 34.597	'070 Long: <u>-92.481068</u>	Datum: NAD83			
Soil Map Unit Name: 23 - Savannah-Urban land complex, 3-8% slopes	NWI class	sification: N/A			
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No ( <b>I</b> f no, explain i	n Remarks.)			
Are Vegetation, Soil, or Hydrology significantly	/ disturbed? Are "Normal Circumstance:	s" present? Yes X No			
Are Vegetation, Soil, or Hydrology naturally pr					
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transec	ets, important features, etc.			
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No	10 0110 00111, 1000				
Wetland Hydrology Present? Yes X No	within a Wetland? Yes <u>^</u>	No			
Remarks:					
Site meets all three wetland criteria.					
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Inc	licators (minimum of two required)			
Primary Indicators (minimum of one is required; check all that apply)		oil Cracks (B6)			
Surface Water (A1) Aquatic Fauna (B13) Sparsely Vegetated Concave Surface (B					
High Water Table (A2)  And Deposits (B1:		Patterns (B10)			
Saturation (A3)  Water Marks (B1)  Hydrogen Sulfide  Oxidized Rhizosph		n Lines (B16) on Water Table (C2)			
Sediment Deposits (B2)  Presence of Redu		Burrows (C8)			
		n Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)		nic Position (D2)			
Iron Deposits (B5)	Remarks) 🔲 Shallow A	quitard (D3)			
Inundation Visible on Aerial Imagery (B7)		ral Test (D5)			
Water-Stained Leaves (B9)	<u></u> Sphagnur	n moss (D8) (LRR T, U)			
Field Observations:	,				
Surface Water Present?  Yes No _X Depth (inches Water Table Present?  Yes No _X Depth (inches water Table Present?					
Water Table Present?  Yes No _X Depth (inches Saturation Present?  Yes No _X Depth (inches Saturation Present?		sent? Yes <sup>X</sup> No			
(includes capillary fringe)		103 NO			
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if available:				
Remarks:					
Site meets wetland hydrology criteria.					
,					

### **VEGETATION** (Four Strata) – Use scientific names of plants.

20' radius		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30' radius )		Species?		Number of Dominant Species
1. American elm, Ulmus americana	5	N N	FAC	That Are OBL, FACW, or FAC: 6 (A)
2. loblolly pine, Pinus taeda			FAC	Total Number of Dominant
3. sweetgum, Liquidambar styraciflua	20	<u>Y</u>	FAC	Species Across All Strata: 6 (B)
4. pignut hickory, Carya glabra	10	<u>N</u>	FACU	Percent of Dominant Species
5. red maple, Acer rubrum	60	<u>Y</u>	FAC	That Are OBL, FACW, or FAC: 100 (A/B)
6. black willow, Salix nigra	5	<u>N</u>	OBL	Prevalence Index worksheet:
7				
8				
		= Total Cov		
50% of total cover: 55	20% of	total cover:	22	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15' radius )				FAC species x 3 =
1. red maple, Acer rubrum	10	Υ	FAC	FACU species x 4 =
2. Chinese privet, Ligustrum sinense	20	Υ	FAC	UPL species x 5 =
3.				Column Totals: (A) (B)
4				Prevalence Index = B/A =
5.				Hydrophytic Vegetation Indicators:
6.				1 - Rapid Test for Hydrophytic Vegetation
7.				✓ 2 - Dominance Test is >50%
8.				
<u> </u>	30	= Total Cov	er	3 - Prevalence Index is ≤3.0¹
50% of total cover: 15				Problematic Hydrophytic Vegetation¹ (Explain)
Herb Stratum (Plot size: 5' radius )	2070 01	total cover.		1
1. smartweed, Persicaria sp.*	10	Υ	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.				Definitions of Four Vegetation Strata:
				Deminions of Four Vegetation official.
3				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5				more in diameter at breast height (DBH), regardless of height.
6				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
7				undir o m. BBT and groater than 0.20 ft (1 m) tan.
8				Herb – All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10				Woody vine - All woody vines greater than 3.28 ft in
11	· ——			height.
12	- 10			
_		= Total Cov		
·	20% of	total cover:		
Woody Vine Stratum (Plot size: 30' radius )	22			
1. roundleaf greenbrier, Smilax rotundifolia	20	<u>Y</u>	FAC	
2				
3				
4				
5				Hydrophytic
	20	= Total Cov	er	Vegetation
50% of total cover: 10	20% of	total cover:	4	Present? Yes X No
B 1 05 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	`			

Remarks: (If observed, list morphological adaptations below).

Site meets hydrophytic vegetation criteria.

\*Of the 14 species of Persicaria listed in Arkansas for the AGCP Region, all are FAC or wetter, with the majority (50%) being OBL.

		to the dep	oth needed to docun			or confirm	the absence	of indicators.)	
Depth (inches)	Matrix Color (moist)	%	Color (moist)	<u>x Feature</u> %	s Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remark	s
0-2	10 YR 4/3	100						silt loam	_
2-6	10 YR 4/2	70	5 YR 4/6	30	С	М		sandy loam	
6-18	5 YR 5/6	90	10 YR 6/4	20	С	M		sand	_
						· ——			
-				-		·			
1- 0.0						·	2, ,,		
			=Reduced Matrix, MS LRRs, unless other			ains.		PL=Pore Lining, M=Ma for Problematic Hydr	
Histosol		abio to an	Polyvalue Be		· ·	_RR S. T. L		Muck (A9) (LRR O)	
	ipedon (A2)		Thin Dark Su					Muck (A10) (LRR S)	
Black His			Loamy Mucky	y Mineral	(F1) <b>(LRF</b>	R O)	Reduc	ed Vertic (F18) (outsid	•
= -	n Sulfide (A4)		Loamy Gleye		(F2)			ont Floodplain Soils (F1	
	l Layers (A5) Bodies (A6) <b>(LRR P</b>	T 11\	Depleted Mat	` '	E6)			alous Bright Loamy Soil <b>RA 153B)</b>	s (F20)
=	cky Mineral (A7) <b>(L</b> I	-	=	,	,		1 1 '	arent Material (TF2)	
	esence (A8) (LRR L		Redox Depre					Shallow Dark Surface (T	F12)
_	ck (A9) <b>(LRR P, T)</b>		Marl (F10) <b>(L</b>				U Other	(Explain in Remarks)	
	l Below Dark Surfac	e (A11)	Depleted Och		-	-	<b></b> \ 31	- 4 <b>6</b>               -	
=	irk Surface (A12) airie Redox (A16) (l	MI RA 150	☐ Iron-Mangane A) ☐ Umbric Surfa			=	-	cators of hydrophytic ve tland hydrology must be	-
=	lucky Mineral (S1) (		Delta Ochric	, ,	•	, 0,		ess disturbed or probler	•
Sandy G	leyed Matrix (S4)		Reduced Ver	tic (F18) (	(MLRA 1	50A, 150B)			
	edox (S5)		Piedmont Flo						
= ::	Matrix (S6) face (S7) <b>(LRR P, \$</b>	S T II)	<u> </u>	right Loai	my Soils (	(F20) <b>(MLR</b>	A 149A, 153C	, 153D)	
	_ayer (if observed)								
Type:	,								
Depth (inc	ches):						Hydric Soil	Present? Yes X	No
Remarks:	te meets hyd	rio coil	oritorio						
Si	ile meets nyd	ric Soii	cinena.						

Project/Site: Bryant Parkway Alternative B	City/County: Bryant / Saline		Sampling Date: 10/5/2018	
Applicant/Owner: City of Bryant		State: AR	Sampling Point: DP 18	
Investigator(s): Cassie Schmidt	_ Section, Township, Range: Se			
Landform (hillslope, terrace, etc.): wooded area	Local relief (concave, convex, r	none): convex	Slope (%): 3	
Subregion (LRR or MLRA): Lat: 34.59	8611 Long: <u>-</u> 9	2.479173	Datum: NAD83	
Soil Map Unit Name: 25 - Smithdale loamy sand, 3-8% slopes		NWI classifica	ation: N/A	
Are climatic / hydrologic conditions on the site typical for this time of				
Are Vegetation, Soil, or Hydrology significant	y disturbed? Are "Normal	Circumstances" p	resent? Yes X No	
Are Vegetation, Soil, or Hydrology naturally p		xplain any answer		
SUMMARY OF FINDINGS – Attach site map showin	g sampling point locatio	ns, transects	, important features, etc.	
Hydrophytic Vegetation Present?  Yes No _X  Hydric Soil Present?  Yes No _X	Is the Sampled Area		V	
Hydric Soil Present?         Yes	within a Wetland?	Yes	No X	
Remarks:	·			
Site fails to meet all three wetland criteria.				
HYDROLOGY				
Wetland Hydrology Indicators:		Secondary Indica	tors (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply	)	Surface Soil	Cracks (B6)	
Surface Water (A1) Aquatic Fauna (B	13)	Sparsely Veg	etated Concave Surface (B8)	
High Water Table (A2)  Harl Deposits (B		Drainage Pat	terns (B10)	
Saturation (A3) Hydrogen Sulfide		Moss Trim Li	` ′	
	heres along Living Roots (C3)		Nater Table (C2)	
Sediment Deposits (B2)  Presence of Redu  Drift Deposits (B3)  Recent Iron Redu	iction in Tilled Soils (C6)	Crayfish Burr	sible on Aerial Imagery (C9)	
Algal Mat or Crust (B4)  Thin Muck Surface		Geomorphic	• • • •	
Iron Deposits (B5) Other (Explain in	, ,	Shallow Aqui	` '	
Inundation Visible on Aerial Imagery (B7)		FAC-Neutral	Test (D5)	
Water-Stained Leaves (B9)		Sphagnum m	ioss (D8) <b>(LRR T, U)</b>	
Field Observations:				
Surface Water Present? Yes No X Depth (inche				
			t? Yes No <sup>X</sup>	
(includes capillary fringe)		ydrology Presen	t? Yes NO	
Describe Recorded Data (stream gauge, monitoring well, aerial pho	tos, previous inspections), if avai	lable:		
Remarks:				
Site fails to meet wetland hydrology criteria.				
, , , , , , , , , , , , , , , , , , , ,				

### **VEGETATION (Four Strata)** – Use scientific names of plants.

001!	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30' radius )		Species?		Number of Dominant Species
1. pignut hickory, Carya glabra	20	<u>Y</u>	FACU	That Are OBL, FACW, or FAC: 3 (A)
2. white oak, Quercus alba	30	Υ	FACU	Total Number of Dominant
3. loblolly pine, Pinus taeda	10	N	FAC	Species Across All Strata: 6 (B)
4. sweetgum, Liquidambar styraciflua	40	Υ	FAC	
5.				Percent of Dominant Species  That Are OBL FACW or FAC: 50 (A/B)
6				That Are OBL, FACW, or FAC: (A/B)
				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
8	100			OBL species x 1 =
50		= Total Cov		FACW species x 2 =
50% of total cover: <sup>50</sup>	20% of	total cover:	20	FAC species 85 x 3 = 255
Sapling/Shrub Stratum (Plot size: 15' radius )				1 AO species X 3 =
1. sweetgum, Liquidambar styraciflua	20	<u>Y</u>	FAC	
2. white oak, Quercus alba	10	Υ	FACU	UPL species x 5 =
3				Column Totals: <u>145</u> (A) <u>495</u> (B)
4.				Prevalence Index = B/A = 3.4
5				
				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
8	00			☐ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
_		= Total Cov		☐ Problematic Hydrophytic Vegetation¹ (Explain)
50% of total cover: 15	20% of	total cover:	6	
Herb Stratum (Plot size:)				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1				be present, unless disturbed or problematic.
2. None observed				Definitions of Four Vegetation Strata:
3.				
4				<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
_				height.
•				
6				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
7				than 3 in. DBH and greater than 3.20 it (1 iii) tall.
8				Herb – All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10				Woody vine – All woody vines greater than 3.28 ft in
11				height.
12				
	:	= Total Cov	er	
50% of total cover:	20% of	total cover:		
Woody Vine Stratum (Plot size: 30' radius )				
1 roundleaf greenbrier, Smilax rotundifolia	15	Υ	FAC	
2				
2				
3				
4				
5				Hydrophytic
		= Total Cov		Vegetation   Present?   Yes No X
50% of total cover: 7.5	20% of	total cover:	3	Present? Yes No X
Remarks: (If observed, list morphological adaptations bel	ow).			
Site fails to meet hydrophytic vegetatio	•	l.		
· · · ·				

Profile Desc	ription: (Describe	to the dep	oth needed to docur	nent the	indicator	or confirn	n the absence	of indicate	ors.)	
Depth	Matrix			x Feature	s					
<u>(inches)</u>	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>		Remarks	
0-2	10 YR 3/2	100						silt loam 8	k root wad	
2-14	7.5 YR 4/4	95	7.5 YR 6/1	5	D	М		loamy sar	nd; mixed soils	i
14-18	7.5 YR 4/4	70	7.5 YR 6/1	30	D	М		loamy sar	nd; mixed soils	,
		_			-					
	-			· ———		· ——				
		_								
										_
1Typo: C=Co	ncontration D=Dor	olotion DM	=Reduced Matrix, MS	S=Macko	d Sand G	raine	<sup>2</sup> Location:	DI -Doro I	_ining, M=Mat	riv
			LRRs, unless other			allis.			matic Hydric	
Histosol		Judio to un	Polyvalue Be			DDCTI		Лuck (A9) <b>(</b> I	_	, cons .
	ipedon (A2)		Thin Dark Su					лиск (АЭ) <b>(</b> Лиск (А10)		
Black His			Loamy Muck							MLRA 150A,B)
=	n Sulfide (A4)		Loamy Gleye	-		ι Ο,				e) (LRR P, S, T)
_	Layers (A5)		Depleted Ma		()			-	t Loamy Soils	
	Bodies (A6) (LRR F	P, T, U)	Redox Dark	. ,	F6)			RA 153B)	Ž	,
=	cky Mineral (A7) <b>(L</b> l	-	=					arent Mateı	rial (TF2)	
_	esence (A8) (LRR L		Redox Depre						k Surface (TF	12)
1 cm Mu	ck (A9) <b>(LRR P, T)</b>		Marl (F10) <b>(L</b>	.RR U)			U Other	(Explain in	Remarks)	
Depleted	l Below Dark Surfac	ce (A11)	Depleted Ocl	hric (F11)	(MLRA 1	51)	_			
=	rk Surface (A12)		Iron-Mangan			-	•	-	drophytic veg	
=	airie Redox (A16) (		· =		-	-		-	logy must be l	
=	ucky Mineral (S1) (	LRR O, S)	Delta Ochric		-			ess disturbe	ed or problem	atic.
=	leyed Matrix (S4)		Reduced Ver		-	-				
_	edox (S5)		Piedmont Flo		,		,	452D\		
	Matrix (S6)	e T IIV	Anomalous E	sright Loa	my Solis	(FZU) <b>(MLR</b>	RA 149A, 153C	, 153D)		
	face (S7) (LRR P, S .ayer (if observed)						1			
_	ayer (ii observed)	•								
Type:	J ) ·							D 40	V	No _X
Depth (inc	nes)		 				Hydric Soil	Present?	Yes	_ NO
Remarks: Si	te fails to me	et hvdr	c soil criteria.							

Applicant/Owner; Elyant Parkway Alternative B  City/County, Bryant / Saline  State: AR  Sampling Date: 10/5/2018  Sampling Point: DP 19  Sampling Point: DP 19  Subregion (LRR or MLRA):  Lat: 34/598614  Long: -92-479237  Datum: NAD83  Sol Map Unit Name: 25 - Smithdale loamy sand, 3-8% slopes  NWI classification: NA  Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)  Are Vegetation Sol or Hydrology indicators:  SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.  Hydrophylic Vegetation Present? Yes X No (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.  Hydrophylic Vegetation Present? Yes X No (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.  Hydrophylic Vegetation Present? Yes X No (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.  Hydrophylic Vegetation Present? Yes X No (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.  Hydrophylic Vegetation Present? Yes X No (If needed, explain any answers in Remarks.)  Surface Soll Tracks (B6)  Surface Soll Tracks (B6)  Surface Water (A1)  Surface Soll Tracks (B6)  Surface Water (A1)  Surface Soll Tracks (B6)
Section   Cassie Schmidt   Section   Township, Range: Sec 35, T15, B14W
Local relief (concave, convex, none); Concave Slope (%); C-1 Subregion (LRR or MLRA); Lat: 34.598614 Long: 492.479237 Datum; NAD83 Solim (LRR or MLRA); Lat: 34.598614 Long: 492.479237 Datum; NAD83 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes X No within a Wetland? Yes X No Wetland Hydrology Present? Yes X No within a Wetland? Yes X No Yes X No Wetland Hydrology Present? Yes X No Wetland Hydrology Indicators:  Site meets all three wetland criteria.  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply) Systrace Water (A1) Aquatic Fauna (B13) Systrace Water (A1) Aquatic Fauna (B13) Systrace Water (A1) Aquatic Fauna (B13) Drainage Patterns (B10) Dr
Lat. 34.598614   Long: -92.479237   Datum: NAD83
No   Continue   No   No   No   No   No   No   No   N
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)  Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes X No
Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Wetland Hydrology Indicators:  Site meets all three wetland criteria.  HYDROLOGY  Wetland Hydrology Indicators:  Site meets all three wetland criteria.  Secondary Indicators (minimum of two required) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Mart Deposits (B15) (LRR U) Drainage Patterns (B10) Moss Trim Lines (B16) Drainage Patterns (B10) Draina
Are Vegetation, Soil, or Hydrologynaturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present?
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes X No Welland Hydrology Present? Yes X No Within a Wetland? Yes X No Welland Hydrology Present? Yes X No Welland Hydrology Present? Yes X No Welland Hydrology Present? Yes X No Welland Hydrology Indicators:  Wetland Hydrology Indicators:  No Depth (inches):  Wetland Hydrology Indicators:  Is the Sampled Area within a Wetland?  Yes X No Depth (inches):  Secondary Indicators (minimum of two required)  Yes X No Depth (inches):  Secondary Indicators (minimum of two required)  Primary Indicators (minimum of two required)  Wetland Hydrology Indicators:  No Depth (inches):  Surface Water Present?  Yes X No Depth (inches):  Wetland Hydrology Present? Yes X No Depth (inches):  Wetland Hydrology Present? Yes X No Depth (
Hydrophytic Vegetation Present?  Wetland Hydrology Present?  Wetland Hydrology Present?  Wetland Hydrology Present?  Wetland Hydrology Indicators:  Site meets all three wetland criteria.  HYDROLOGY  Wetland Hydrology Indicators:  Secondary Indicators (minimum of two required)  Primary Indicators (minimum of one is required: check all that apply)  Surface Water (A1)  Surface Water (A1)  Hydrogen Sulfide Odor (C1)  Saturation (A3)  Hydrogen Sulfide Odor (C1)  Saturation (A3)  Wetland Hydrology Indicators:  Marti Deposits (B15) (LRR U)  Hydrogen Sulfide Odor (C1)  Saturation (A3)  Weter Marks (B1)  Oxidized Rhizospheres along Living Roots (C3)  Dry-Season Water Table (C2)  Sediment Deposits (B2)  Presence of Reduced Iron (C4)  Sediment Deposits (B3)  Recent Iron Reduction in Tilled Soils (C6)  Algal Mat or Crust (B4)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Yes X  No  Depth (inches): Surface  Wetland Hydrology Present? Yes X  No  Depth (inches): Surface  Wetland Hydrology Present? Yes X  No  Depth (inches): Surface  Wetland Hydrology Present? Yes X  No  Depth (inches): Surface  Wetland Hydrology Present? Yes X  No  Depth (inches): Surface  Wetland Hydrology Present? Yes X  No  Depth (inches): Surface  Wetland Hydrology Present? Yes X  No  Depth (inches): Surface  Wetland Hydrology Present? Yes X  No  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Hydrology Present? Yes X No within a Wetland? Yes X No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Criteria.  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required: check all that apply) Surface Soil Cracks (B6)  Surface Water (A1) Aquatic Fauna (B13) Sparsely Vegetated Concave Surface (B8)  High Water Table (A2) Hydrogen Sulfide Odor (C1) Most Trim Lines (B16)  Water Marks (B1) Oxidized Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2)  Sediment Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)  I ron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3)  I nundation Visible on Aerial Imagery (B7)  Water Table Present? Yes X No Depth (inches): Surface  Wetland Hydrology Present? Yes X No Depth (inches): Surface  Wetland Hydrology Present? Yes X No Depth (inches): Surface  Wetland Hydrology Present? Yes X No Depth (inches): Surface  Wetland Hydrology Present? Yes X No Depth (inches): Surface  Wetland Hydrology Present? Yes X No Depth (inches): Surface  Wetland Hydrology Present? Yes X No Depth (inches): Surface  Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks: Site meets all three wetland criteria.  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)  Surface Soil Cracks (B6)  Yes Jane Hydrogon Sulface (B8)  High Water Table (A2)  Water Marks (B1)  Water Marks (B1)  Drainage Patterns (B10)  Wass Trin Lines (B16)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Algal Mat or Crust (B4)  Iron Deposits (B3)  Iron Deposits (B5)  Unundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Fac-Neutral Test (D5)  Sphagnum moss (D8) (LRR T, U)  Field Observations:  Surface Water Present?  Yes X No Depth (inches): Surface  Wetland Hydrology Present? Yes X No Depth (inches): Surface  Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks: Site meets all three wetland criteria.  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Water Marks (B1)  Oxidized Rhizospheres along Living Roots (C3)  Sediment Deposits (B2)  Presence of Reduced Iron (C4)  Algal Mat or Crust (B4)  Presence of Reduced Iron (C4)  Algal Mat or Crust (B4)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Tield Observations:  Surface Water (A1)  Depth (inches):  Secondary Indicators (minimum of two required)  Secondary Indicators (minimum of two required)  Sparsely Vegetated Concave Surface (B8)  Drainage Patterns (B10)  Drainage Patterns (B10)  Was Trim Lines (B16)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Algal Mat or Crust (B4)  Inundation Visible on Aerial Imagery (B7)  FAC-Neutral Test (D5)  Sphagnum moss (D8) (LRR T, U)  FIELD Observations:  Surface Water Present?  Yes X No Depth (inches): Surface  Wetland Hydrology Present? Yes X No Depth (inches): Surface  Wetland Hydrology Present? Yes X No Depth (inches): Surface  Wetland Hydrology Present? Yes X No Depth (inches): Surface  Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required: check all that apply)  Surface Water (A1)  High Water Table (A2)  Water Marks (B1)  Drift Deposits (B3)  Agal Mat or Crust (B4)  Algal Mat or Crust (B4)  Into Deposits (B5)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Yes X  No  Depth (inches):  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Drainge Patterns (B10)  Water Concave Surface (B8)  Drainge Patterns (B10)  Water Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Drainge Patterns (B10)  Water Soil Cracks (B6)  Sparsely Indicators (minimum of two required)  Sparsely Vegetated Concave Surface (B8)  Prasence (B1)  Drainge Patterns (B10)  Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Sphagnum moss (D8) (LRR T, U)  Field Observations:  Surface Water Present?  Yes X  No  Depth (inches): Surface  Wetland Hydrology Present? Yes X  No  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Wetland Hydrology Indicators: (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two required)         Primary Indicators (minimum of one is required: check all that apply)       Surface Water (A1)       Vaquatic Fauna (B13)       Vaparely Vegetated Concave Surface (B8)         High Water Table (A2)       Marl Deposits (B15) (LRR U)       Drainage Patterns (B10)         Vater Marks (B1)       Vater Marks (B1)       Vater Marks (B10)         Sediment Deposits (B2)       Presence of Reduced Iron (C4)       Crayfish Burrows (C8)         Drift Deposits (B3)       Recent Iron Reduction in Tilled Soils (C6)       Saturation Visible on Aerial Imagery (C9)         Indicators (B4)       Thin Muck Surface (C7)       Geomorphic Position (D2)         Inundation Visible on Aerial Imagery (B7)       Thin Muck Surface (C7)       Shallow Aquitard (D3)         Vater-Stained Leaves (B9)       Present?       Yes X       No Depth (inches): Surface         Water Table Present?       Yes X       No Depth (inches): Surface       Wetland Hydrology Present? Yes X       No No         Cluddes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Wetland Hydrology Indicators: (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two required)         Primary Indicators (minimum of one is required: check all that apply)       Surface Water (A1)       Surface Soil Cracks (B6)         ✓ Surface Water (A1)       ✓ Aquatic Fauna (B13)       ✓ Sparsely Vegetated Concave Surface (B8)         ✓ High Water Table (A2)       Marl Deposits (B15) (LRR U)       Drainage Patterns (B10)         ✓ Water Marks (B1)       Oxidized Rhizospheres along Living Roots (C3)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Presence of Reduced Iron (C4)       Crayfish Burrows (C8)         Drift Deposits (B3)       Recent Iron Reduction in Tilled Soils (C6)       Saturation Visible on Aerial Imagery (C9)         ✓ Iron Deposits (B5)       Other (Explain in Remarks)       Shallow Aquitard (D3)         ✓ Inundation Visible on Aerial Imagery (B7)       FAC-Neutral Test (D5)         ✓ Water-Stained Leaves (B9)       Depth (inches): O-8"         Water Table Present?       Yes X       No Depth (inches): Surface         Water Table Present?       Yes X       No Depth (inches): Surface         (includes capillary fringe)       Wetland Hydrology Present? Yes X       No Depth (inches): Surface         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Wetland Hydrology Indicators: (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two required)         Primary Indicators (minimum of one is required: check all that apply)       Surface Water (A1)       Surface Soil Cracks (B6)         ✓ Surface Water (A1)       ✓ Aquatic Fauna (B13)       ✓ Sparsely Vegetated Concave Surface (B8)         ✓ High Water Table (A2)       Marl Deposits (B15) (LRR U)       Drainage Patterns (B10)         ✓ Water Marks (B1)       Oxidized Rhizospheres along Living Roots (C3)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Presence of Reduced Iron (C4)       Crayfish Burrows (C8)         Drift Deposits (B3)       Recent Iron Reduction in Tilled Soils (C6)       Saturation Visible on Aerial Imagery (C9)         ✓ Iron Deposits (B5)       Other (Explain in Remarks)       Shallow Aquitard (D3)         ✓ Inundation Visible on Aerial Imagery (B7)       FAC-Neutral Test (D5)         ✓ Water-Stained Leaves (B9)       Depth (inches): O-8"         Water Table Present?       Yes X       No Depth (inches): Surface         Water Table Present?       Yes X       No Depth (inches): Surface         (includes capillary fringe)       Wetland Hydrology Present? Yes X       No Depth (inches): Surface         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Wetland Hydrology Indicators: (minimum of one is required: check all that apply)       Secondary Indicators (minimum of two required)         Primary Indicators (minimum of one is required: check all that apply)       Surface Water (A1)       Surface Soil Cracks (B6)         ✓ Surface Water (A1)       ✓ Aquatic Fauna (B13)       ✓ Sparsely Vegetated Concave Surface (B8)         ✓ High Water Table (A2)       Marl Deposits (B15) (LRR U)       Drainage Patterns (B10)         ✓ Water Marks (B1)       Oxidized Rhizospheres along Living Roots (C3)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Presence of Reduced Iron (C4)       Crayfish Burrows (C8)         Drift Deposits (B3)       Recent Iron Reduction in Tilled Soils (C6)       Saturation Visible on Aerial Imagery (C9)         ✓ Iron Deposits (B5)       Other (Explain in Remarks)       Shallow Aquitard (D3)         ✓ Inundation Visible on Aerial Imagery (B7)       FAC-Neutral Test (D5)         ✓ Water-Stained Leaves (B9)       Depth (inches): O-8"         Water Table Present?       Yes X       No Depth (inches): Surface         Water Table Present?       Yes X       No Depth (inches): Surface         (includes capillary fringe)       Wetland Hydrology Present? Yes X       No Depth (inches): Surface         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Primary Indicators (minimum of one is required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Indicators (minimum of one is required; check all that apply)  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils (C6)  Indicators (Minimum of one is required; check all that apply)  Sparsely Vegetated Concave Surface (B8)  Drainage Patterns (B10)  Moss Trim Lines (B16)  Dray-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Algal Mat or Crust (B4)  Indicators (Mark (B1)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Yes X No Depth (inches): Surface  Saturation Present?  Yes X No Depth (inches): Surface  Wetland Hydrology Present?  Yes X No Depth (inches): Surface  Wetland Hydrology Present?  Yes X No Depth (inches): Surface  Wetland Hydrology Present?  Yes X No Depth (inches): Surface  Wetland Hydrology Present?  Yes X No Depth (inches): Surface  Wetland Hydrology Present?  Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
✓ Surface Water (A1) ✓ Aquatic Fauna (B13) ✓ Sparsely Vegetated Concave Surface (B8)   ✓ High Water Table (A2) ✓ Marl Deposits (B15) (LRR U) ✓ Drainage Patterns (B10)   ✓ Saturation (A3) ✓ Hydrogen Sulfide Odor (C1) ✓ Moss Trim Lines (B16)   ✓ Water Marks (B1) ✓ Oxidized Rhizospheres along Living Roots (C3) ✓ Dry-Season Water Table (C2)   ✓ Sediment Deposits (B2) ✓ Presence of Reduced Iron (C4) ✓ Crayfish Burrows (C8)   ✓ Drift Deposits (B3) ✓ Recent Iron Reduction in Tilled Soils (C6) ✓ Saturation Visible on Aerial Imagery (C9)   ✓ Iron Deposits (B5) ✓ Other (Explain in Remarks) ✓ Shallow Aquitard (D3)   ✓ Inundation Visible on Aerial Imagery (B7) ✓ FAC-Neutral Test (D5)   ✓ Water-Stained Leaves (B9) ✓ FAC-Neutral Test (D5)   ✓ Sphagnum moss (D8) (LRR T, U)    Field Observations:  Surface Water Present?  Yes X No Depth (inches): Surface  Wetland Hydrology Present? Yes X No Linches Yes X No Linches): Surface  Wetland Hydrology Present? Yes X No Linches Yes X No Lin
✓ High Water Table (A2)       ✓ Marl Deposits (B15) (LRR U)       ☐ Drainage Patterns (B10)         ✓ Saturation (A3)       ✓ Hydrogen Sulfide Odor (C1)       ✓ Moss Trim Lines (B16)         ✓ Water Marks (B1)       ☐ Oxidized Rhizospheres along Living Roots (C3)       ☐ Dry-Season Water Table (C2)         ☐ Sediment Deposits (B2)       ☐ Presence of Reduced Iron (C4)       ☐ Crayfish Burrows (C8)         ☐ Drift Deposits (B3)       ☐ Recent Iron Reduction in Tilled Soils (C6)       ☐ Saturation Visible on Aerial Imagery (C9)         ☐ Iron Deposits (B5)       ☐ Other (Explain in Remarks)       ☐ Shallow Aquitard (D3)         ✓ Inundation Visible on Aerial Imagery (B7)       ✓ FAC-Neutral Test (D5)         ✓ Water-Stained Leaves (B9)       ☐ Sphagnum moss (D8) (LRR T, U)         Field Observations:         Surface Water Present?       Yes X No Depth (inches): Surface         Water Table Present?       Yes X No Depth (inches): Surface         Saturation Present?       Yes X No Depth (inches): Surface         Wetland Hydrology Present? Yes X No Depth (inches): Surface         Obscribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
✓ Saturation (A3)       ✓ Hydrogen Sulfide Odor (C1)       ✓ Moss Trim Lines (B16)         ✓ Water Marks (B1)       ✓ Oxidized Rhizospheres along Living Roots (C3)       ✓ Dry-Season Water Table (C2)         ✓ Sediment Deposits (B2)       ✓ Presence of Reduced Iron (C4)       ✓ Crayfish Burrows (C8)         ✓ Drift Deposits (B3)       ✓ Recent Iron Reduction in Tilled Soils (C6)       ✓ Saturation Visible on Aerial Imagery (C9)         ✓ Iron Deposits (B5)       ✓ Other (Explain in Remarks)       ✓ Shallow Aquitard (D3)         ✓ Inundation Visible on Aerial Imagery (B7)       ✓ FAC-Neutral Test (D5)         ✓ Water-Stained Leaves (B9)       ✓ Sphagnum moss (D8) (LRR T, U)     Field Observations:  Surface Water Present?  Yes X No Depth (inches): Surface  Wetland Hydrology Present? Yes X No (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Water Marks (B1)
Sediment Deposits (B2)
Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Vater-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Yes X No Depth (inches): surface  Saturation Present?  Yes X No Depth (inches): surface  Saturation Present?  Yes X No Depth (inches): surface  Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Recent Iron Reduction in Tilled Soils (C6)  Gaturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Sphagnum moss (D8) (LRR T, U)  Field Observations:  Surface Water Present?  Yes X No Depth (inches): surface  Wetland Hydrology Present? Yes X No
Algal Mat or Crust (B4)  Iron Deposits (B5)  Other (Explain in Remarks)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Water Table Present?  Yes X No Depth (inches): surface  Saturation Present?  Yes X No Depth (inches): surface  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
✓ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Shallow Aquitard (D3)   ✓ Inundation Visible on Aerial Imagery (B7) ✓ FAC-Neutral Test (D5)   ✓ Water-Stained Leaves (B9) ☐ Sphagnum moss (D8) (LRR T, U)    Field Observations:  Surface Water Present?  Water Table Present?  Yes X No Depth (inches): surface (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:    Shallow Aquitard (D3)  FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)  Wetland Hydrology Present? Yes X No No Depth (inches): surface Wetland Hydrology Present? Yes X No No Depth (inches): surface (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Water-Stained Leaves (B9)  Field Observations:  Surface Water Present? Yes X No Depth (inches): 0-8"  Water Table Present? Yes X No Depth (inches): surface  Saturation Present? Yes X No Depth (inches): surface  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Field Observations:  Surface Water Present? Yes X No Depth (inches): 0-8"  Water Table Present? Yes X No Depth (inches): surface  Saturation Present? Yes X No Depth (inches): surface  (includes capillary fringe)  Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Surface Water Present? Yes X No Depth (inches): 0-8"  Water Table Present? Yes X No Depth (inches): surface  Saturation Present? Yes X No Depth (inches): surface  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Water Table Present? Yes X No Depth (inches): surface Saturation Present? Yes X No Depth (inches): surface (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Saturation Present? Yes X No Depth (inches): surface Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Damaska
Site meets wetland hydrology criteria.
one meets welland hydrology officina.
Frogs and iron sheen on the water surface present.
Trogs and non-shoon on the water surface present.

### **VEGETATION (Four Strata)** – Use scientific names of plants.

001!	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30' radius )		Species?		Number of Dominant Species
1. American elm, Ulmus americana		<u>N</u>	FAC	That Are OBL, FACW, or FAC: $\frac{4}{}$ (A)
2. Ioblolly pine, Pinus taeda		N	FAC	Total Number of Dominant
3. sweetgum, Liquidambar styraciflua	60	<u>Y</u>	FAC	Species Across All Strata: 4 (B)
4. pignut hickory, Carya glabra	10	N	FACU	Percent of Dominant Species
5. red maple, Acer rubrum	10	N	FAC	That Are OBL, FACW, or FAC: 100 (A/B)
6				
7				Prevalence Index worksheet:
8				Total % Cover of: Multiply by:
	400	= Total Cov	er	OBL species x 1 =
50% of total cover: 50				FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15' radius )				FAC species x 3 =
1. sweetgum, Liquidambar styraciflua	10	Υ	FAC	FACU species x 4 =
2. common buttonbush, Cephalanthus occidentalis	20	Y	OBL	UPL species x 5 =
				Column Totals: (A) (B)
3				
4				Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
8				3 - Prevalence Index is ≤3.0 <sup>1</sup>
	30	= Total Cov	er	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover: 15	20% of	total cover:	6	
Herb Stratum (Plot size: 5' radius )				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1 woolgrass, Scirpus cyperinus	50	Υ	OBL	be present, unless disturbed or problematic.
2.				Definitions of Four Vegetation Strata:
3.				_
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
4 5.				more in diameter at breast height (DBH), regardless of height.
•				
6				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
7				than 3 in. DBH and greater than 3.20 it (1 iii) tail.
8				Herb – All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10				Woody vine – All woody vines greater than 3.28 ft in
11.				height.
12				
	50	= Total Cov	er	
50% of total cover: 25	20% of	total cover:	10	
Woody Vine Stratum (Plot size:)				
1.				
2. None observed				
3.				
4				
5.				
5				Hydrophytic Vegetation
500/ C		= Total Cov		Present? Yes X No No No
50% of total cover:		total cover:		
Remarks: (If observed, list morphological adaptations believed)	•			
Site meets hydrophytic vegetation crite	ria.			

		to the dep	oth needed to docun			or confirm	the absence	of indicators.)	
Depth (inches)	Matrix Color (moist)	%	Color (moist)	<u>k Feature</u> %	s Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-2	10 YR 4/2	100						silt loam	
2-6	10 YR 5/2	70	7.5 YR 5/6	30	С	M&PL		sandy loam	
6-18	10 YR 6/4	50	7.5 YR 5/6	10	С	PL		sand	
	10 YR 6/2	40						-	
				-		·			
		<del>-</del>							
				-		· ——			
1						<del> </del>	2		
			=Reduced Matrix, MS LRRs, unless other			ains.		PL=Pore Lining, M=Matrix.  for Problematic Hydric Soils <sup>3</sup> :	
Histosol		babic to an	Polyvalue Be		· ·	RRSTI		Muck (A9) (LRR O)	
	ipedon (A2)		Thin Dark Su					Muck (A10) <b>(LRR S)</b>	
Black His			Loamy Mucky				1 1	ed Vertic (F18) (outside MLRA 1	150A,B)
Hydroge	n Sulfide (A4)		Loamy Gleye				Piedm	ont Floodplain Soils (F19) <b>(LRR F</b>	P, S, T)
=	l Layers (A5)		Depleted Mat	` '			·	alous Bright Loamy Soils (F20)	
=	Bodies (A6) (LRR F		Redox Dark S	`	,		1 1 '	RA 153B)	
_	cky Mineral (A7) <b>(L</b> esence (A8) <b>(LRR l</b>		) Depleted Dar Redox Depre					arent Material (TF2) Shallow Dark Surface (TF12)	
=	ck (A9) <b>(LRR P, T)</b>	,	Marl (F10) (L		0)			(Explain in Remarks)	
=	Below Dark Surfac	ce (A11)	Depleted Och		(MLRA 1	51)		(Explain III remaine)	
	rk Surface (A12)	. ,	Iron-Mangan		-	-	T) <sup>3</sup> Indic	cators of hydrophytic vegetation a	ınd
=	airie Redox (A16) (		· <b>—</b>	, ,	•	Γ, <b>U</b> )		tland hydrology must be present,	
=	lucky Mineral (S1) (	LRR O, S)				-0.4 4E0D)		ess disturbed or problematic.	
=	leyed Matrix (S4) edox (S5)		Reduced Ver			-			
	Matrix (S6)						эд) A 149A, 153C	:. 153D)	
= ::	face (S7) <b>(LRR P,</b> S	S, T, U)			,	, (	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,	
Restrictive L	ayer (if observed)	:							
Type:									
Depth (inc	ches):						Hydric Soil	Present? Yes X No _	
Remarks: Si	te meets hyd	lric soil	criteria						
O.	ito iniooto riyo		oritoria:						

Project/Site: Bryant Parkway Alternative B	City/County: Bryant / Saline	Sampling Date:
Applicant/Owner: City of Bryant	State: AR	Sampling Point: DP 20
Investigator(s): Cassie Schmidt	Section, Township, Range: Sec 26, T1S	
Landform (hillslope, terrace, etc.): wooded area	Local relief (concave, convex, none): co	onvex Slope (%): <sup>3</sup>
Subregion (LRR or MLRA): Lat: 34.607	<sup>787</sup> Long: _ <sup>-92.473942</sup>	Datum: NAD83
Subregion (LRR or MLRA): Lat: 34.607  Soil Map Unit Name: 22 - Savannah fine sandy loam, 3-8% slopes	NWI	classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of ye		
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumst	ances" present?   Yes_X   No
Are Vegetation, Soil, or Hydrology naturally pro		y answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, trar	nsects, important features, etc.
Hydrophytic Vegetation Present?  Yes X No	Is the Sampled Area	V
Hydric Soil Present?         Yes	within a Wetland? Yo	es No <u>X</u>
Remarks:		
Site fails to meet all three wetland criteria.		
HYDROLOGY		
Wetland Hydrology Indicators:	Seconda	ry Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		ace Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B1		rsely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15)		nage Patterns (B10)
Saturation (A3) Hydrogen Sulfide (	Odor (C1)	s Trim Lines (B16)
		Season Water Table (C2)
Sediment Deposits (B2)		fish Burrows (C8)
	` ' =	ration Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4)       ☐ Thin Muck Surface         ☐ Iron Deposits (B5)       ☐ Other (Explain in F	· ·	morphic Position (D2) low Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)		-Neutral Test (D5)
Water-Stained Leaves (B9)		agnum moss (D8) (LRR T, U)
Field Observations:		
Surface Water Present? Yes No X Depth (inches		
Water Table Present? Yes No X Depth (inches		, , , , , , , , , , , , , , , , , , ,
Saturation Present? Yes No X Depth (inches (includes capillary fringe)	: <sup>&gt;18"</sup> Wetland Hydrology	Present? Yes No X
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if available:	
Remarks:		
Site fails to meet wetland hydrology criteria.		
One rails to most wettaria hydrology emeria.		

### **VEGETATION (Four Strata)** – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius )			Indicator	Dominance Test worksheet:
1. pignut hickory, Carya glabra	<u>% Cover</u> 30	Species?	Status FACU	Number of Dominant Species That Are OBL, FACW, or FAC: <sup>3</sup> (A
American elm, Ulmus americana	20	<u>Y</u>	FAC	That Are OBL, FACW, or FAC: 3 (A
B loblolly pine, Pinus taeda	10	N	FAC	Total Number of Dominant Species Across All Strata:  5 (B
sweetgum, Liquidambar styraciflua	20	<u></u>	FAC	Species Across All Strata: 5 (B
white oak, Quercus alba	20	Y	FACU	Percent of Dominant Species
				That Are OBL, FACW, or FAC: 60 (A
). -				Prevalence Index worksheet:
7. 3.				Total % Cover of: Multiply by:
·	100	= Total Cov		OBL species x 1 =
50% of total cover: 50	20% of			FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15' radius )	20 /6 01	total cover		FAC species x 3 =
sweetgum, Liquidambar styraciflua	10	Υ	FAC	FACU species x 4 =
2.				UPL species x 5 =
				Column Totals: (A) (I
l				
i. i				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
S				1 - Rapid Test for Hydrophytic Vegetation
7. 3.				2 - Dominance Test is >50%
h	10	= Total Cov		☐ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
50% of total cover: <sup>5</sup>				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
None observed  None observed  None observed  None observed  None observed				¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree – Woody plants, excluding vines, 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless height.  Sapling/Shrub – Woody plants, excluding vines, lest than 3 in. DBH and greater than 3.28 ft (1 m) tall.  Herb – All herbaceous (non-woody) plants, regardle of size, and woody plants less than 3.28 ft tall.  Woody vine – All woody vines greater than 3.28 ft in height.
		= Total Cov	ver	
50% of total cover:	20% of	total cover	:	
Voody Vine Stratum (Plot size:)				
None observed				
l				
·				
5				Hydrophytic
		= Total Cov	ver	Vegetation
50% of total cover:	20% of	f total cover	:	Present? Yes X No
Site meets hydrophytic vegetation crit	•			
one meete nyaropnytic vegetation chi	ona.			
Pine needles and shade preventing he	erbaceou	s growt	h.	

Profile Desc	ription: (Describe	to the depth	needed to docur	nent the i	ndicator o	or confirm	the absence	of indicate	ors.)	
Depth	Matrix			x Features		1 2	<b>-</b> .			
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	1	Remarks	
0-6	10 YR 4/2	100						loam		
	-							-		
·								-		
1 <sub>Tymes</sub> C=C			advacd Matrix M	C=Mookod	Cand Cre		21 continue	DI =Doro I	ining M-Mot	ats.
	oncentration, D=Dep Indicators: (Applic					ins.			ining, M=Mati matic Hydric	
		able to all Li			· ·				_	Julis .
Histosol			Polyvalue Be		. , .		. —	luck (A9) <b>(I</b>	· ·	
Black Hi	oipedon (A2)		☐ Thin Dark Su☐ Loamy Muck					luck (A10)		MLRA 150A,B)
=	n Sulfide (A4)		Loamy Gleye	•	. , .	0)				) (LRR P, S, T)
	Layers (A5)		Depleted Ma	•	1 2)			-	: Loamy Soils	
	Bodies (A6) <b>(LRR P</b>	P. T. U)	Redox Dark		·6)			RA 153B)	Loanly Cono	(1 20)
=	cky Mineral (A7) (L		Depleted Da	•	,			arent Mater	ial (TF2)	
	esence (A8) (LRR L		Redox Depre						k Surface (TF	12)
	ck (A9) (LRR P, T)	,	Marl (F10) (L	•	,			(Explain in		,
Depleted	Below Dark Surfac	e (A11)	■ Depleted Oc	hric (F11)	(MLRA 15	i1)				
☐ Thick Da	rk Surface (A12)		Iron-Mangan	ese Masse	es (F12) <b>(I</b>	_RR O, P, 1	<b>T)</b> ³Indic	ators of hy	drophytic vege	etation and
Coast Pi	airie Redox (A16) (I	MLRA 150A)	Umbric Surfa	ice (F13) <b>(</b>	LRR P, T,	U)	wet	land hydrol	ogy must be p	oresent,
Sandy №	lucky Mineral (S1) (	LRR O, S)	Delta Ochric	(F17) <b>(ML</b>	.RA 151)		unle	ess disturbe	ed or problema	atic.
_	leyed Matrix (S4)		Reduced Ve							
	edox (S5)		Piedmont Flo							
	Matrix (S6)		Anomalous E	Bright Loan	ny Soils (F	20) <b>(MLR</b>	A 149A, 153C,	, 153D)		
	face (S7) (LRR P, S									
	_ayer (if observed) s throughout	:								
• • • • • • • • • • • • • • • • • • • •			<u>—</u>					- 40	.,	x
Depth (ind	ches): <u>°</u>						Hydric Soil	Present?	Yes	No
Remarks: S	ite fails to me	et hydric	soil criteria.							
•		ot 11, a.1.0	oon ontona.							
9	everal locatio	ne wore	attompted a	II data	nointe	word to	o "rooty"	to dia n	act 6"	
3	everal locallo	iis were a	allempieu, a	II uala	points	were to	o rooty	to dig p	asi o	

Project/Site: Bryant Parkway Alternative B	City/County: Bryant / Saline	Sampling Date: 10/5/2018
Applicant/Owner: City of Bryant	State: AR	Sampling Point: DP 21
Investigator(s): Cassie Schmidt	Section, Township, Range: Sec 35, T1S,	
Landform (hillslope, terrace, etc.): wooded area		
Subregion (LRR or MLRA):		
Soil Map Unit Name: 2 - Amy silt loam, 0-1% slopes	NWI c	lassification: N/A
Are climatic / hydrologic conditions on the site typical for this time of ye		
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstar	nces" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr		
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, trans	sects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area	V
Hydric Soil Present?         Yes         No           Wetland Hydrology Present?         Yes         No	within a Wetland? Yes	s No <sup>X</sup>
Remarks:		
Site fails to meet all three wetland criteria.		
HYDROLOGY		
Wetland Hydrology Indicators:		/ Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		ce Soil Cracks (B6)
Surface Water (A1)  Aquatic Fauna (B1)  Mad Describe (B4)		ely Vegetated Concave Surface (B8)
High Water Table (A2) Saturation (A3)  High Water Table (A2) Hydrogen Sulfide (A3)	_	age Patterns (B10) Trim Lines (B16)
		eason Water Table (C2)
Sediment Deposits (B2)  Presence of Reduc		sh Burrows (C8)
		ation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface	(C7) Geom	orphic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in F		ow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)		Neutral Test (D5)
☐ Water-Stained Leaves (B9)  Field Observations:	Sphag	gnum moss (D8) (LRR T, U)
Surface Water Present? Yes No X Depth (inches	<i>)</i> ·	
Water Table Present?  Yes No _X Depth (inches		
Saturation Present? Yes No X Depth (inches		Present? Yes No_X
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photo		
Describe Recorded Data (Stream gauge, monitoring well, aenai photi	os, previous inspections), il available.	
Remarks:		
Site fails to meet wetland hydrology criteria.		

### **VEGETATION (Four Strata)** – Use scientific names of plants.

001		Dominant		Dominance Test worksheet:	
Tree Stratum (Plot size: 30' radius )		Species?		Number of Dominant Species	
water oak, Quercus nigra		<u>Y</u>	FAC	That Are OBL, FACW, or FAC: 6	(A)
sweetgum, Liquidambar styraciflua		Y	FAC	Total Number of Dominant	
loblolly pine, Pinus taeda		<u>Y</u>	FAC	Species Across All Strata: 6	(B)
				Percent of Dominant Species	
j					(A/B)
),				Prevalence Index worksheet:	
<sup>7</sup>					
3				Total % Cover of: Multiply by:	
	100	= Total Cov	ver	OBL species x 1 =	
50% of total cover: <sup>50</sup>	20% of	total cover	<u>20</u>	FACW species x 2 =	
Sapling/Shrub Stratum (Plot size: 15' radius )				FAC species x 3 =	
sweetgum, Liquidambar styraciflua	10	<u>Y</u>	FAC	FACU species x 4 =	
2.				UPL species x 5 =	
3				Column Totals: (A)	_ (B)
l				Prevalence Index = B/A =	
j.				Hydrophytic Vegetation Indicators:	
S				1 - Rapid Test for Hydrophytic Vegetation	
·				2 - Dominance Test is >50%	
3				3 - Prevalence Index is ≤3.0¹	
	10	= Total Cov	ver	Problematic Hydrophytic Vegetation¹ (Explain	.)
50% of total cover: <sup>5</sup>	20% of	f total cover	. 2	Troblematic Trydrophytic Vegetation (Explain	''
Herb Stratum (Plot size: 5' radius )				<sup>1</sup> Indicators of hydric soil and wetland hydrology ma	uet
eastern poison ivy, Toxicodendron radicans	5	Υ	FAC	be present, unless disturbed or problematic.	usi
				Definitions of Four Vegetation Strata:	
3.					
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm more in diameter at breast height (DBH), regardles	
5.				height.	33 01
S				Sanling/Shrub Woody plants evaluding vines	looo
7.				Sapling/Shrub – Woody plants, excluding vines, I than 3 in. DBH and greater than 3.28 ft (1 m) tall.	iess
3.					
). 				Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall.	sselt
10 11				<b>Woody vine</b> – All woody vines greater than 3.28 f	ft in
				height.	
2	5	= Total Cov			
50% of total acress 2.5					
50% of total cover: 2.5	20% of	total cover	:		
Voody Vine Stratum (Plot size: 30' radius ) roundleaf greenbrier, Smilax rotundifolia	10	٧	FAC		
•		<u>Y</u>			
). 					
3					
l					
5				Hydrophytic	
<u>-</u>		= Total Cov		Vegetation   Present?   Yes X   No	
50% of total cover: 5		total cover	: <u></u>	100	
Remarks: (If observed, list morphological adaptations bel	ow).				
Site meets hydrophytic vegetation crite	ria.				
, , , ,					
Pine needles and shade preventing he	rhaceou	s arowt	h		
The fieldies and shade preventing he	, DaoGua	o growt			

Depth (inches)			Б.							
	Matrix Color (moist)	%	Color (moist)	<u>x Feature</u> %	s Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-2	10 YR 3/2	100						loam		
2-12	10 YR 4/2	90	7.5 YR 5/6	10	С	М		loamy sar	nd	
				-				-		
				-				-		
								-		
					-					
			-							
			=Reduced Matrix, MS			ains.			ining, M=Matrix.	3
		cable to all	LRRs, unless other		· ·				matic Hydric So	ils":
Histosol	(A1) ipedon (A2)		☐ Polyvalue Be☐ Thin Dark Su					1uck (A9) <b>(</b> l 1uck (A10)		
Black Hi			Loamy Mucky				1 1		-18) (outside ML	RA 150A.B)
	n Sulfide (A4)		Loamy Gleye			,			ain Soils (F19) <b>(L</b>	
=	Layers (A5)		Depleted Mat	, ,			· · · · · · · · · · · · · · · · · · ·	_	t Loamy Soils (F2	0)
=	Bodies (A6) (LRR F	-	Redox Dark S	`	,			RA 153B)	:-L(TEO)	
	cky Mineral (A7) <b>(L</b> esence (A8) <b>(LRR I</b>		) Depleted Dar Redox Depre					arent Matei hallow Dar	rai (TF2) k Surface (TF12)	
_	ck (A9) <b>(LRR P, T)</b>	3,	Marl (F10) (L	,	0)			Explain in	, ,	
=	l Below Dark Surfac	ce (A11)	Depleted Och		(MLRA 1	51)	<u>—</u>		•	
=	rk Surface (A12)		Iron-Mangane		• ,		•	-	drophytic vegetati	
=	airie Redox (A16) <b>(</b> ucky Mineral (S1) <b>(</b>		A) Umbric Surfa Delta Ochric		•	', U)		-	logy must be pres ed or problematic	
=	leyed Matrix (S4)	LIKIK O, 3)	Reduced Ver		-	0A. 150B)		ss distuibl	ed of problematic.	•
=	edox (S5)		Piedmont Flo		-	-				
=	Matrix (S6)		Anomalous B	right Loa	my Soils (	F20) <b>(MLR</b>	A 149A, 153C	, 153D)		
	face (S7) (LRR P,									
_	.ayer (if observed)	·-								
Type: Depth (inc	hee).						Hydric Soil	Prosent?	Yes _X	No
Domorko							Tiyane don			
Si	te meets hyd	lric soil	criteria.							

Bryant Parkway, Alternative B

# **APPENDIX E**

**Site Photographs** 





**▲**Wetland 1 (PEM)—Emergent wetland exhibiting standing water located near south end of Study Area.



**▲** DP 1—Hydric soil with a depleted matrix was observed at DP 1 within Wetland 1.



**▲**OW 1—An ephemeral stream located east of Wetland 1. View facing upstream to the west.



**▲** OW 1—Section of the ephemeral stream located north of Wetland 1. View facing upstream to the north.



**▲** Wetland 2 (PEM)—Emergent wetland exhibiting standing water located north of Airport hangars.



▲ DP 4—Hydric soil with a depleted matrix was observed at DP 4 within Wetland 2.



**▲** Wetland 3 (PFO)—Forested wetland exhibiting drift deposits located near west edge of Study Area.



▲ DP 17—Hydric soil with a depleted matrix (4" thick) was observed at DP 17 within Wetland 3.



**▲**OW 2a—View of substrate (primarily silt) within this unnamed tributary to Crooked Creek.



▲ OW 2b—An ephemeral stream located within Wetland 3. View facing upstream to the southeast.



**▲** Wetland 4a (PFO)—Forested wetland located northeast of Wetland 3.



**▲ DP 19—Soil within Wetland 4 met hydric soil criteria** as the wetland exhibited a hydrogen sulfide odor.



**▲** Wetland 4b (PEM)—This emergent wetland is located immediate adjacent to Wetland 4a.



**▲** OW 3—An ephemeral stream located northeast of Wetland 4. View facing upstream to the southeast.



**▲** OW 4a—An ephemeral stream that crosses through the center of the Study Area. View facing north.



**▲** OW 4a—East end of ephemeral stream OW 4a. View facing upstream to the southeast.



▲ Wetland 5 (PFO)—This forested wetland is located 0.27 mi. northwest of the north end of the runway.



**▲** Wetland 5 (PFO)—This forested wetland exhibited standing water, saturation, and a high water table.



▲ DP 6—Hydric soil with a depleted matrix was observed at DP 6 within Wetland 5.



**▲** Wetland 6 (PEM)—An emergent wetland exhibiting standing water located north of Wetland 5.



▲ DP 8—Soil within Wetland 6 met hydric soil criteria as the wetland exhibited a hydrogen sulfide odor.



▲ Wetland 7 (PEM)—An emergent wetland exhibiting standing water located north of Wetland 6.



**▲**DP 10—Hydric soil with redox depressions and a hydrogen sulfide odor was observed at Wetland 7.



▲ Wetland 7 (PEM)—An emergent wetland exhibiting standing water located north of Wetland 6.



 $\blacktriangle$  Wetland 8 (PFO)—A forested wetland located in the floodplain south of Crooked Creek.



**▲ DP 16—Hydric soil with a depleted matrix was observed at DP 16 within Wetland 8.** 



**▲**OW 5a, Crooked Creek—A perennial stream located south of Wetland 9. View facing upstream to the west.



**▲**OW 5b, Crooked Creek—A perennial stream located south of Wetland 9. View facing upstream to the west.



**▲**OW 5a, Crooked Creek—View facing SW toward S bank of OW 5 at confluence w/ unnamed tributary.



▲ OW 6—An ephemeral stream located at N end of Study Area. View facing downstream to the south.



▲OW 6—An ephemeral stream located at N end of Study Area. View facing upstream to the north.



▲OW 6—An ephemeral stream located at N end of Study Area. View facing downstream to the south.

Bryant Parkway, Alternative B

## **APPENDIX F**

## **Weather History Data**

https://www.wunderground.com/history/daily/us/ar/bryant/KARBRYAN6/



S

Search Locations

Log in (/

Recent Cities (/ TBARINA CALIDA SIDE STORED (Weather/us/ks/edgerton/38.76,-95.02) Talihina, OK (weather/us/ok/talihina/34.76,-95.08) Smithville, OK (weather/us/ok/talihina/34.76,-95.08) Smithville, OK (weather/us/ok/talihina/34.76,-95.08)

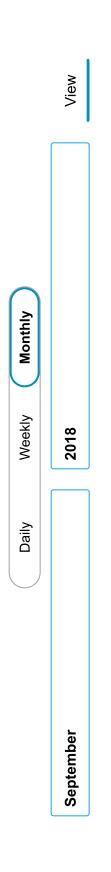
Elev 259ft 34.73 °N, 92.22 °W

# Adams, AR 🖈 🖪

→ 46° ADAMS STATION (/HISTORY/DAILY/US/AR/LITTLE-ROCK/KLIT/DATE/2018-10-16?CM\_VEN=LOCALWX\_PWSDASH) | CHANGE ∨

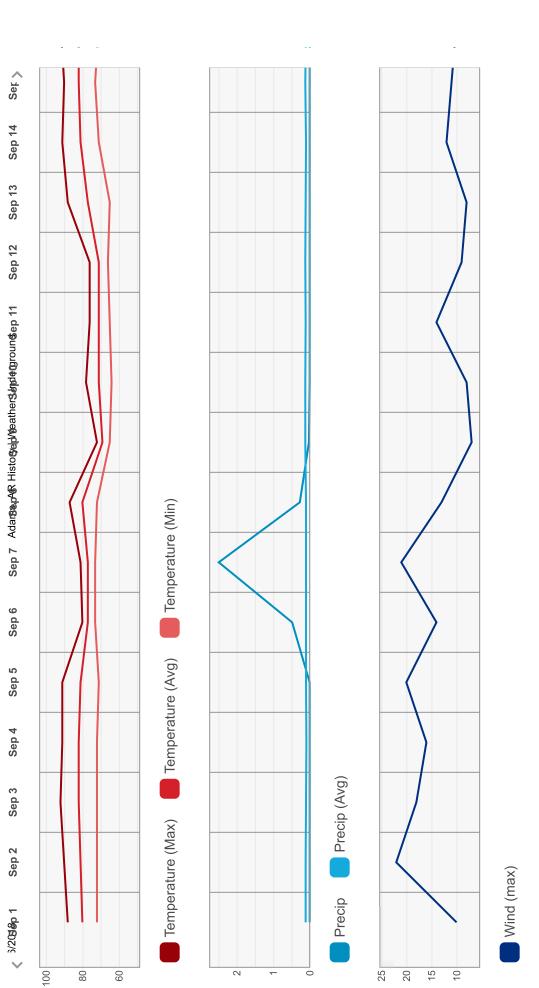
<u>HISTORY (/HISTORY/DAILY/US/AR/LITTLE-ROCK/KLIT/DATE/2018-10-16)</u>

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- WUNDERMAP (/WUNDERMAP?LAT=34.72888947&LON=-92.22444153)



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# Summary

Sum	•	ı
Min	73	29
Average	84	92
Мах	94	84
Temperature (° F)	Max Temperature	Avg Temperature

https://www.wunderground.com/history/monthly/us/ar/little-rock/KLIT/date/2018-9

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10/16/2018 <b>Temperature (° F)</b>	ure (° F)	_						Adams N	Adams, AR History   Weather Underground Max Average	Weather	Undergrc Av	ound erage		Min	c	Sum	۶	•
Min Temperature	rature								65			61		54	-+	ı		
Precipitation (Inches)	ion (Inc	hes)						2	Max		Ą	Average		Min	C	Sum	E	•
Precipitation	LC							7	2.49			0.26		0		6.94	4	
Dew Point (° F)	t (° F)							2	Max		Ą	Average		Min	c	Sum	۶	•
Dew Point									78			69		53		ı		
Daily Observations	C		677¢	tio	<b>V</b>													
Time	Tempe	Temperature (° F)	(° F)	Dew	Dew Point (° F)	<u> </u>	Hnm	Humidity (%)	(9)	Wind S	Wind Speed (mph)	hph)	Pre	Pressure (Hg)	(b)	Preci	Precipation (in)	Appendix
Sep	Мах	Avg	Min	Мах	Avg	Min	Мах	Avg	Min	Мах	Avg	Min	Мах	Avg	Min	Max	Avg	H: PJC <u>⊆</u> ∑
<del>-</del>	88	80	72	74	72	71	100	ı	59	10	ı	0	30.09	ı	29.98	ı	0.00	) & We
7	06	81	72	75	73	72	100	ı	59	22	ı	4	30.08	ı	29.99	1	00.00	tland D
ო	95	82	72	74	72	70	100	ı	49	8	ı	0	30.14	ı	30.03	I	0.00	elinea <sup>.</sup>
4	91	82	72	73	72	70	100	ı	52	16	ı	0	30.14	ı	30.02	I	0.00	tion Re
5	91	81	71	73	11	69	100	ı	52	20	ı	0	30.12	ı	29.99	I	0.00	port -
9	80	77	73	78	75	72	100	ı	87	4	ı	5	30.05	ı	29.95	I	0.48	Page 1
7	81	22	73	2.2	75	73	100	ı	97	21	ı	0	30	ı	29.91	1	2.49	13 of 1
∞	87	80	72	92	74	72	100	ı	70	13	1	0	29.93		29.8		0.27	118
o	72	69	65	72	89	99	100		84	7		0	29.96	ı	29.84	ı	0.02	ı

							A	Append	dix H:	PJD &	Wetlar	nd Delii	neatior	n Repo	rt - Paç	ge 114	of 118		
(ii)	ı	1	1	1	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı
Precipation (in)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94	1.79	0.26	0.05	0.23	0.03	0.38	0.00
፵	ı	ı	ı	ı	ı	ı	ı	ı	ı	Ī	ı	ı	ı	ı	ı	ı	ı	ı	
(Hg)	29.95	30.04	30.06	30.02	29.99	29.96	29.89	29.91	29.9	29.9	29.91	29.97	30.03	29.94	29.87	29.91	30	30.02	30.08
Pressure (Hg)	ı	ı		ı	ı		ı		ı	ı		ı	ı		ı				ı
Pre	30.06	30.14	30.15	30.13	30.09	30.08	30	30	30.01	30.01	30.02	30.08	30.12	30.04	29.97	30.04	30.13	30.09	30.2
Wind Speed (mph)	4	0	4	0	0	0	0	0	0	0	0	0	9	9	0	0	0	0	0
Speed	ı	ı		ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı
Wind	80	14	<b>o</b>	8	12	7	10	10	9	10	13	23	20	10	80	12	17	17	6
) (%)	69	69	82	55	56	56	52	46	52	46	46	56	93	93	79	22	63	84	89
Humidity (%)	ı	1	1	1	1	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	1	1	ı
I	100	100	100	100	100	87	94	100	94	100	94	100	100	100	100	100	100	100	100
(° F)	63	62	29	65	71	89	29	69	20	69	20	71	62	63	92	89	53	56	22
Dew Point (° F)	64	65	89	69	72	20	71	73	73	74	72	73	65	64	20	72	64	58	09
Dev	99	29	71	73	74	72	75	75	75	9/	74	75	72	99	9/	74	72	09	63
(° F)	64	65	99	65	71	73	71	73	73	73	73	71	62	63	65	89	09	26	54
Temperature (° F)	71	71	71	77	81	82	82	83	84	84	83	82	29	65	73	78	29	61	64
Tem	78	9/	9/	88	91	06	92	93	94	94	93	92	71	29	81	87	73	65	74
Time	10	7	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28

					, , , , ,	J. 1 GIA 1 11	. 00		idild L	· · · · · ·	allon 10	port	. ago		31 110	
(in)	ı															
Precipation (in)	00.00	00.00														
Pre	ı	ı			<u> </u>											
(Hg)	30.15	30.13			wunderground											
Pressure (Hg)	30.25 -	30.23 -			Jobs (https://careers.weather.com/search/?q=&locationsearch=san+francsico?utm_source=careersite&utm_campaign=wunderground)											
Wind Speed (mph)	0	0			urce=careersite	<u>n</u> ).			[.]	. <u>//uc</u>				<u>lic</u> y.)		
d Spe	ı	1	Ö	_	m sou	nd.com		~	<u>/eathe</u>	erstatio			<u>[a]</u>	acy-po	ces)	<u>(SI</u>
Wind	တ	10	-company	ontact-us	ncsico?ut	ndergrour	<u>wnload)</u>	<u>aather/api</u>	Ilscreenw	s (/weath	<u>emap/).</u>	<u>emap/).</u>	ı <u>pany/leg</u>	<u>oany/priva</u>	<u>y/ad-choi</u>	<u>cy-setting</u>
Humidity (%)	64	58	About (/about/our-company)	Contact (/about/contact-us)	ırch=san+fra	Feedback (http://help.wunderground.com/)	Our Apps (/download)	Weather API (/weather/api)	Full Screen Weather (/fullscreenweather)	Personal Weather Stations (/weatherstation/)	Site Map (/sitemap/)	Site Map (/sitemap/)	Terms of Use (/company/legal)	NEW Privacy Policy_((company/privacy-policy)	AdChoices (/company/ad-choices)	Data Rights (/privacy-settings)
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Ĭ	100	100			?q=&locat	Feedb			Full 8	Person			·	NEW Pr	¥	
(° F)	26	58			om/search/											
Dew Point (° F)	61	65			ather.cc											
Dew	65	71			careers.we											
Temperature (° F)	55	28			<u>///:sdtth) sqc</u>											
eratur	29	71			긹											
Temp	78	83														

Search Locations

Log in (/

Recent Cities (/ TBARINA CALIDA SIDE STORED (Weather/us/ks/edgerton/38.76,-95.02) Talihina, OK (weather/us/ok/talihina/34.76,-95.08) Smithville, OK (weather/us/ok/talihina/34.76,-95.08) Smithville, OK (weather/us/ok/talihina/34.76,-95.08)

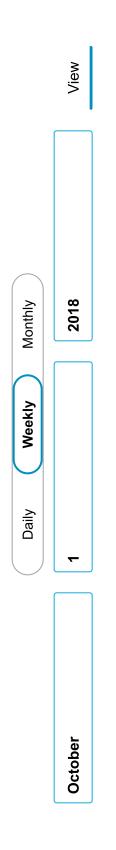
Elev 259ft 34.73 °N, 92.22 °W

# Adams, AR 🖈 🖪

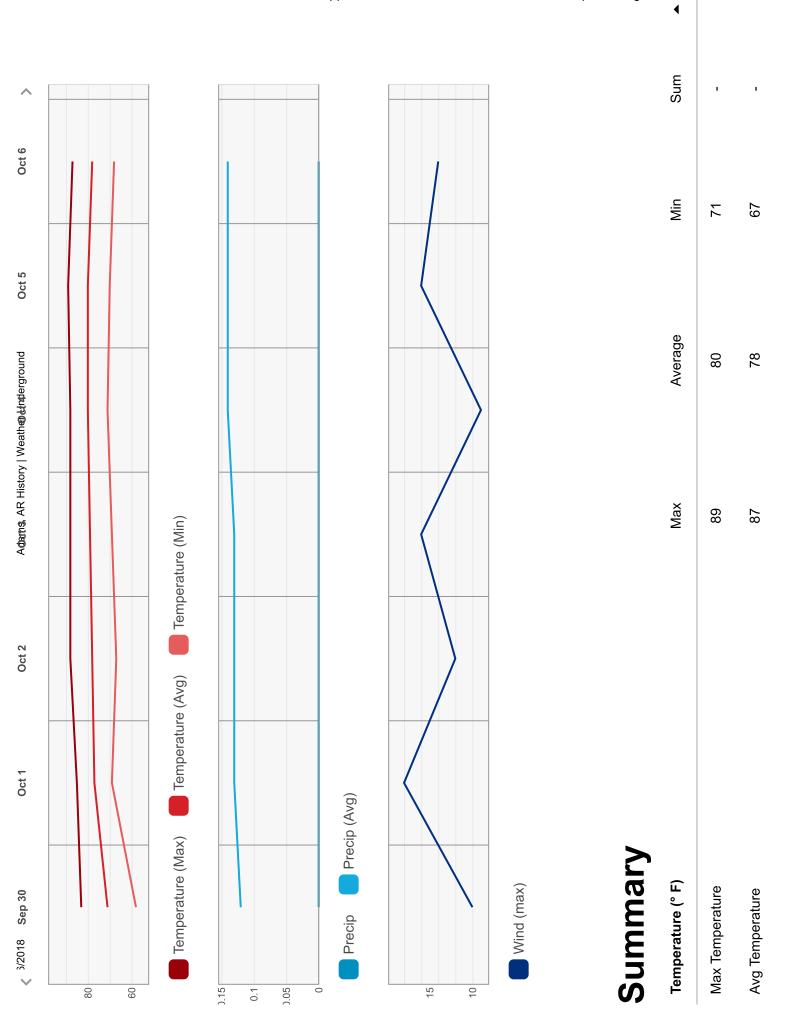
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1,4



Temperature (° F)	ure (° F)							2	Мах		Ā	Average		Min	c	Sum	_	•
Min Temperature	erature							~	83			71		58		1		
Precipitation (Inches)	ion (Incł	les)						2	Max		Ā	Average		Min	C	Sum	_	•
Precipitation	uc								0			0		0		0		
Dew Point (° F)	t (° F)							2	Max		Ā	Average		Min	C	Sum	_	•
Dew Point								,-	75			71		28	<u>~</u>	1		
Daily	Ō	)SC	Daily Observations	tio	ns													Αŗ
Time	Tempe	Temperature (° F)	(° F)	Dew	Dew Point (° F)	. F)	Hur	Humidity (%)	(3	Wind S	Wind Speed (mph)	(ydu	Pres	Pressure (Hg)	(b)	Precip	Precipation (in)	
Sep	Max	Avg	Min	Max	Avg	Min	Мах	Avg	Min	Max	Avg	Min	Мах	Avg	Min	Max	Avg	H: PJC ≅
30	83	71	58	71	65	58	100	ı	58	10	ı	0	30.23	ı	30.13	1	0.00	) & We
~	85	77	69	73	71	69	100	ı	65	18	ı	0	30.23	ı	30.12		0.00	tland C
7	88	78	29	75	11	89	100	ı	55	12	ı	0	30.19	ı	30.07	ı	0.00	elinea
ო	88	62	69	74	72	70	100	ı	29	16	ı	0	30.08	ı	29.96	ı	0.00	
4	88	80	71	75	73	69	100	1	63	6	ı	0	30.11	ı	29.99	1	0.00	
Ŋ	89	80	20	75	73	71	100	1	56	16	1	0	30.06	1	29.96		- 00.0	
9	87	78	89	72	20	89	100	1	53	4	ı	0	30.06	ı	29.97	ı	00.00	
																		18