

PUBLIC NOTICE

CORPS OF ENGINEERS

Application Number: MVK 2021-00270

Date: April 5, 2021

Comments Due: May 5, 2021

TO WHOM IT MAY CONCERN: Comments are invited on the work described below. Please see the <u>Public Involvement</u> section for details on submitting comments.

<u>Point of Contact</u>. If additional information is desired, please contact the regulator, Johnny McLean, telephone number: (501) 340-1382, mailing address: Little Rock District Corps of Engineers, Regulatory Division, PO Box 867, Little Rock, Arkansas 72203-0867, email address: <u>Johnny.L.McLean@usace.army.mil</u>. An electronic copy of the Arkansas Department of Transportation-Moro Creek Mitigation Bank prospectus and wetland delineation can be viewed on the Little Rock District, Regulatory Division webpage at http://www.swl.usace.army.mil/Missions/Regulatory/PublicNotices.aspx or a hard copy can be obtained from the Corps of Engineers through the contact information listed above.

<u>Project Information</u>. Pursuant to Section 404 of the Clean Water Act (33 U.S. Code 1344), notice is hereby given that

Arkansas Department of Transportation PO Box 2261 Little Rock, Arkansas 72203-2261

proposes the establishment of a wetland and stream mitigation bank in Cleveland and Dallas Counties, Arkansas, and has submitted their Moro Creek Mitigation Bank prospectus. The proposed 944.7-acre site is located approximately five miles southeast of the community of Carthage and just east of Highway 229 and west of Highway 167. The prospectus outlines the proposal for developing and operating the bank, which is known as the banking instrument. After public comments are received and any issues are resolved on the prospectus, Arkansas Department of Transportation (ArDOT) will submit a draft banking instrument to the District Engineer. The District Engineer will then distribute the draft banking instrument to the Interagency Review Team (IRT), which is made up of the Corps and the pertinent state and Federal resource agencies. The IRT will review the banking instrument and coordinate with Arkansas Department of Transportation on any issues until a final banking instrument is completed. Finally, the District Engineer will review the final instrument and make a decision to approve or not approve.

The primary purpose of this bank is to mitigate for unavoidable impacts to streams and wetlands for highway construction and maintenance authorized under Section 404 of the Clean Water Act and located within the U.S. Army Corps of Engineers Vicksburg District. The management goal for the mitigation bank is the restoration and preservation of wetlands and streams, and riparian areas along with associated uplands. Objectives include the preservation of existing forested

wetlands and riparian areas and the restoration of wetlands and riparian areas through reforestation of clear-cut land with bottomland hardwood tree species. Stream function would be restored by the removal of several crossings that were constructed during the logging of the property. The site has been burned and treated with herbicide once in order to remove logging debris and control vegetation. There is a total of approximately 532.4 acres of wetlands (preservation and restoration) located on the property and ArDOT is proposing 30.1 acres of wetland preservation and 502.3 acres of wetland restoration. There is a total of approximately 299.2 acres of riparian stream buffer located on the property and ArDOT is proposing 235.2 acres of riparian restoration and 64 acres of riparian preservation.

The primary considerations for site selection were watershed needs, baseline conditions, and habitat connectivity. The proposed mitigation bank includes Moro Creek, Lawrence Moro Creek, Fite Creek, Pickett Creek, Spy Branch and the wetlands/riparian areas associated with the creek channels. The Arkansas Department of Natural Heritage records indicate historic occurrences of the Red-Cockaded Woodpecker (*Leuconotopicus borealis*) located just north and south of the proposed mitigation bank site.

Much of the property lies within the 100-year floodplain of the Moro Creek. A 1956 aerial image illustrates that the areas identified for riparian and wetland restoration were historically forested. These areas were clear cut during standard silviculture operations. Upland areas of the property will function as a buffer and wildlife sanctuary for terrestrial wildlife and migratory birds in times of flooding. The proposed Moro Creek Mitigation Bank is in the Tertiary Uplands (Level IV Ecoregion, 35a) of the South Central Plains (Level III Ecoregion, 35). Potential natural vegetation is oak-hickory-pine forest. Mixed shortleaf pine-loblolly pine forest and upland deciduous forest is native. In riparian areas, potential natural vegetation is bottomland forest. Native vegetation in the clear-cut areas; e.g. warty panicgrass (*Panicum verrucosum*) (FACW), fowl mannagrass (Glyceria striata) (OBL), clammy hedgehyssop (Gratiola neglecta) (OBL), false nettle (*Boehmeria cylindrica*) (FACW), bearded beggarticks (*Bidens aristosa*) (FACW), cypress panicgrass (Dichanthelium dichotomum) (FAC), and variable panicgrass (Dichanthelium commutatum) (FAC). Native woody vegetation on the natural levees and forested preservation areas; e.g. red maple (Acer rubrum) (FAC), ironwood (Carpinus caroliniana) (FAC), sweetgum (Liquidambar styraciflua) (FAC), deciduous holly (Ilex decidua) (FACW), blackgum (Nyssa sylvatica) (FAC), persimmon (Diospyros virginiana) (FAC), water oak (Quercus nigra) (FAC), cherrybark oak (Quercus pagoda) (FACW), American holly (Ilex opaca) (FAC), willow oak (Quercus phellos) (FACW), water oak (Quercus nigra) (FAC), swamp chestnut oak (Quercus michauxii) (FACW), and Nuttall's oak (Quercus texana) (FACW).

Soils on the site are mapped into five soil units by the USDA (*Soil Survey of Calhoun and Dallas Counties*, *Arkansas 1980*; *Soil Survey of Cleveland County*, *Arkansas 1968*). Guyton soils consist of very deep, poorly drained to very poorly drained, slowly permeable soils that formed in thick loamy sediments. Guyton soils are typically found on Coastal Plain local stream floodplains and in depressional areas on late Pleistocene age terraces; slopes range from 0 to 1 percent (Guyton OSD 2019). Amy silt loam is described as very deep, poorly drained, slowly permeable soils that formed in alluvium high in silt. Amy soils are found on Pleistocene terraces in the Western and Southern Coastal Plains; slopes range from 0 to 3 percent (Amy OSD 2019).

Wehadkee soils are described as very deep, poorly to very poorly drained that formed in loamy sediments. Wehadkee soils are typical soils on floodplains along streams that drain from the mountains and piedmont; slopes range from 0 to 2 percent (Wehadkee OSD 2019). Ouachita soils consist of deep, well drained, moderately slowly permeable soils that formed in loamy alluvium. These level to nearly level soils—slopes range from 0 to 3 percent—are on floodplains and natural levees along streams in the Western Coastal Plains (Ouachita OSD 2019). Pheba soils are described as deep, nearly level to very gently sloping somewhat poorly drained soils with moderately slowly permeability that formed in loamy sediments. Pheba soils are typical in broad uplands and terraces in the Southern Coastal Plains Major Land Resource Area; slopes range from 0 to 3 percent (Pheba OSD 2019). Savannah soils consist of very deep, moderately well drained, moderately slowly permeable soils that formed in loamy marine or fluvial terrace deposits. Savannah soils are typically found on uplands and terraces in the Southern Coastal Plain, where slopes range from 0 to 15 percent (Savannah OSD 2019). See Figure 6.

The bank site is located in the Lower Ouachita-Smackover 8-digit (08040201) sub-basin. The primary service and secondary service areas would include the sub-basins, 8-digit hydrologic unit codes (HUCs), in the South-Central Plains Ecoregion from Interstate 30 to the Arkansas/Louisiana state line. The primary service area would include all portions of Bayou D'Arbonne (08040206), Lower Ouachita-Bayou DeLoutre (08040202) and Lower Ouachita-Smackover (08040201). The secondary service area would include all portions of Upper Ouachita (08040102), Lower Saline (08040204) and Bayou Bartholomew (08040205). These sub-basins all are included in the Lower Red-Ouachita sub-region (0804).

The 2002 Charleston Method with the Little Rock Addendum and the 2011 Little Rock Stream Method would be used as the functional assessments and credit generation mechanisms for this bank.

The location and general plan for the proposed work are shown on the enclosed sheets 1 through 5 of 5.

<u>Cultural Resources</u>. ArDOT staff archeologists will review topographic maps, the National Register of Historic Places, and other data on reported sites in the area. The FHWA will be the lead agency for coordination with all associated Native American Nations and tribal governments. The District Engineer invites responses to this public notice from Native American Nations or tribal governments; Federal, State, and local agencies; historical and archeological societies; and other parties likely to have knowledge of or concerns with historic properties in the area.

<u>Endangered Species</u>. Our preliminary determination is that the proposed activity will not affect listed Endangered Species or their critical habitat. A copy of this notice is being furnished to the U.S. Fish and Wildlife Service and appropriate state agencies and constitutes a request to those agencies for information on whether any listed or proposed-to-be-listed endangered or threatened species may be present in the area which would be affected by the proposed activity.

<u>Floodplain</u>. We are providing copies of this notice to appropriate floodplain officials in accordance with 44 Code of Federal Regulations (CFR) Part 60 (Floodplain Management Regulations Criteria for Land Management and Use) and Executive Order 11988 on Floodplain Management.

<u>Regulatory Authority</u>. Implementation of the proposed mitigation bank will require Department of the Army Authorization under Section 404 of the Clean Water Act. Based on preliminary evaluation by the USACE, it appears the proposed bank may be authorized by Nationwide Permit 27 for Aquatic Habitat Restoration, Establishment, and Enhancement Activities.

Public Involvement. Any interested party is invited to submit to the above-listed POC written comments or objections relative to the proposed work on or before May 5, 2021. Substantive comments, both favorable and unfavorable, will be accepted and made a part of the record and will receive full consideration in determining whether this work would be in the public interest. The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Any person may request in writing within the comment period specified in this notice that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. The District Engineer will determine if the issues raised are substantial and whether a hearing is needed for making a decision.

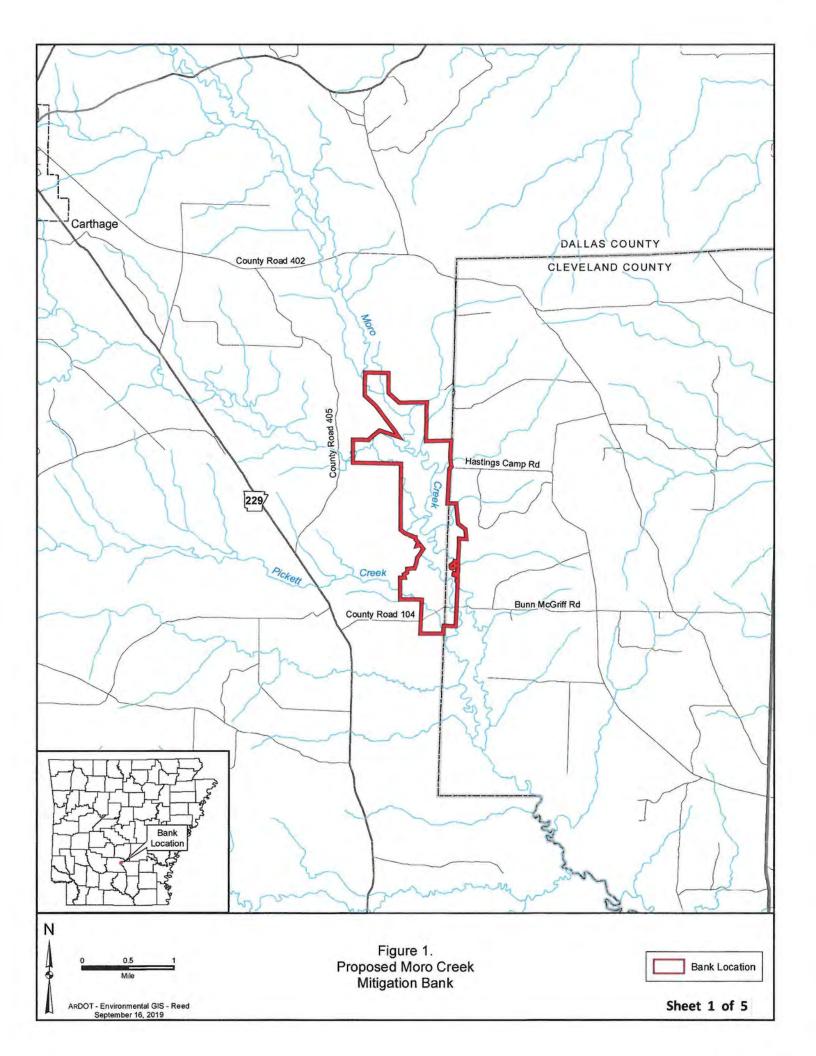
NOTE: The mailing list for this Public Notice is arranged by state and county(s) where the project is located, and includes any addressees who have asked to receive copies of all public notices. Please discard notices that are not of interest to you. If you have no need for any of these notices, please advise us so that your name can be removed from the mailing list.

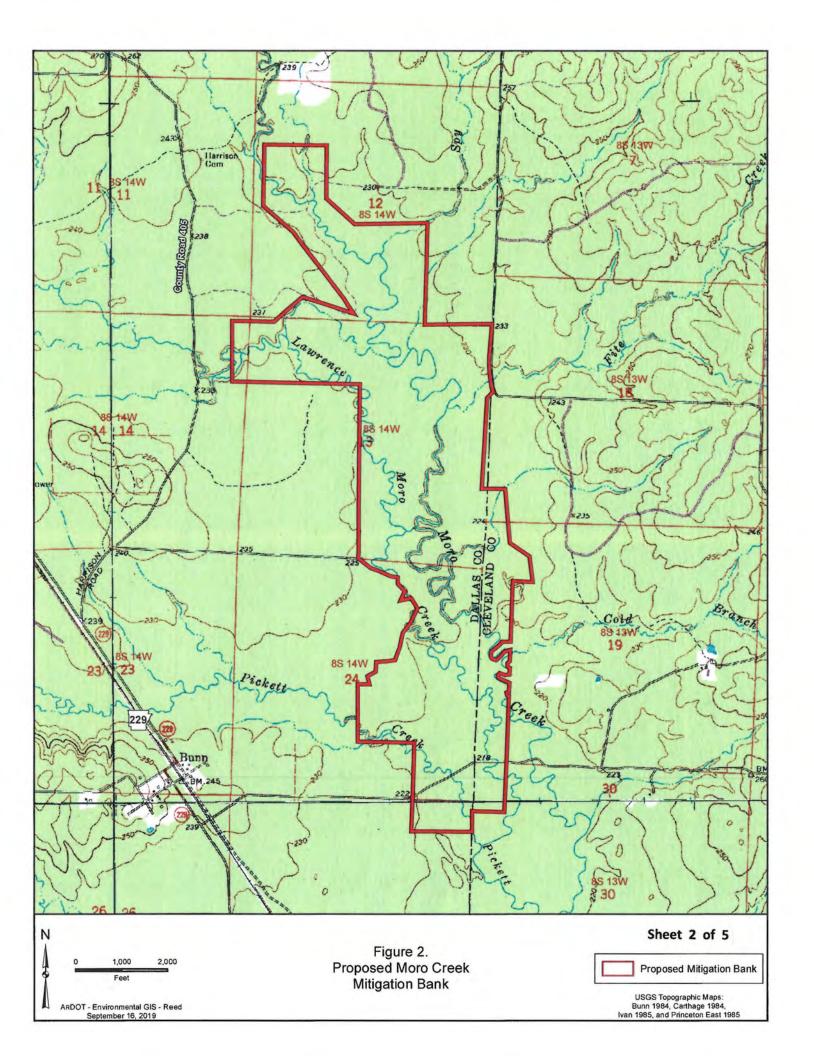
Enclosures

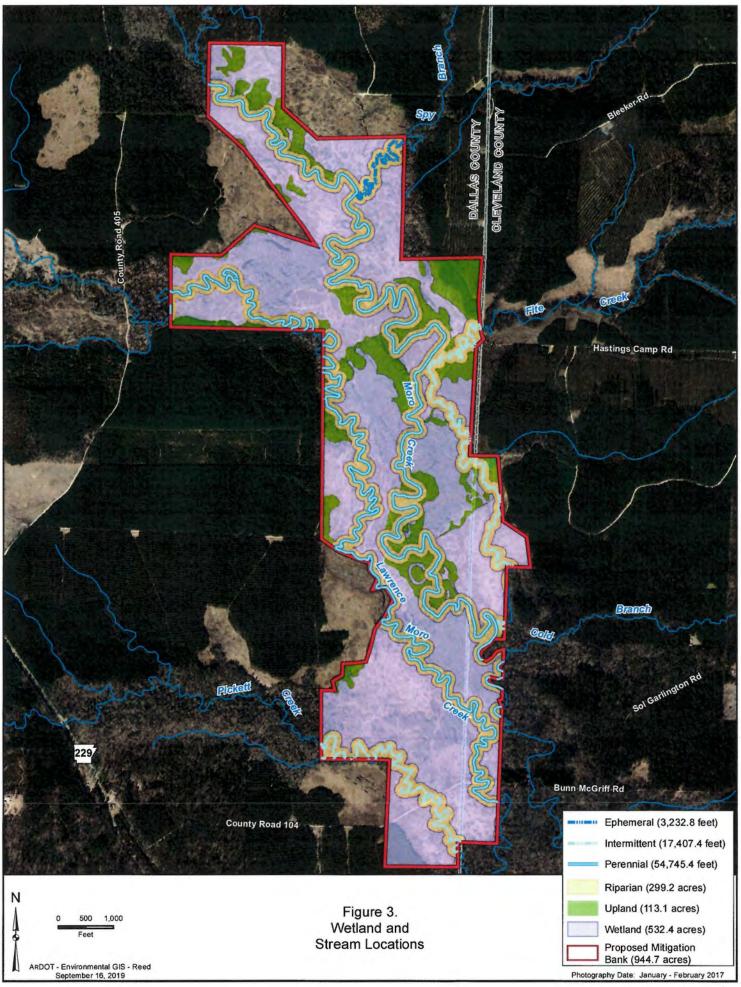
Approximate Coordinates of Project Center

Latitude: **34.013086** Longitude: **-92.476476**

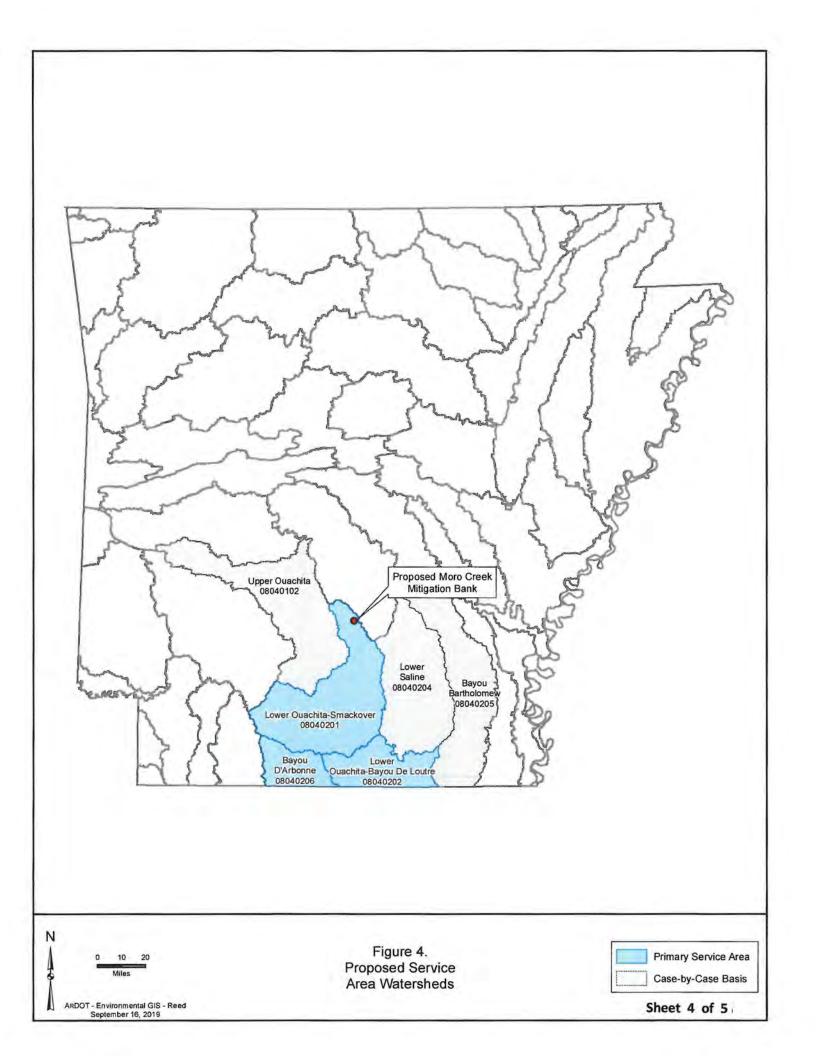
UTM Zone: 15N North: 3763082 East: 548262

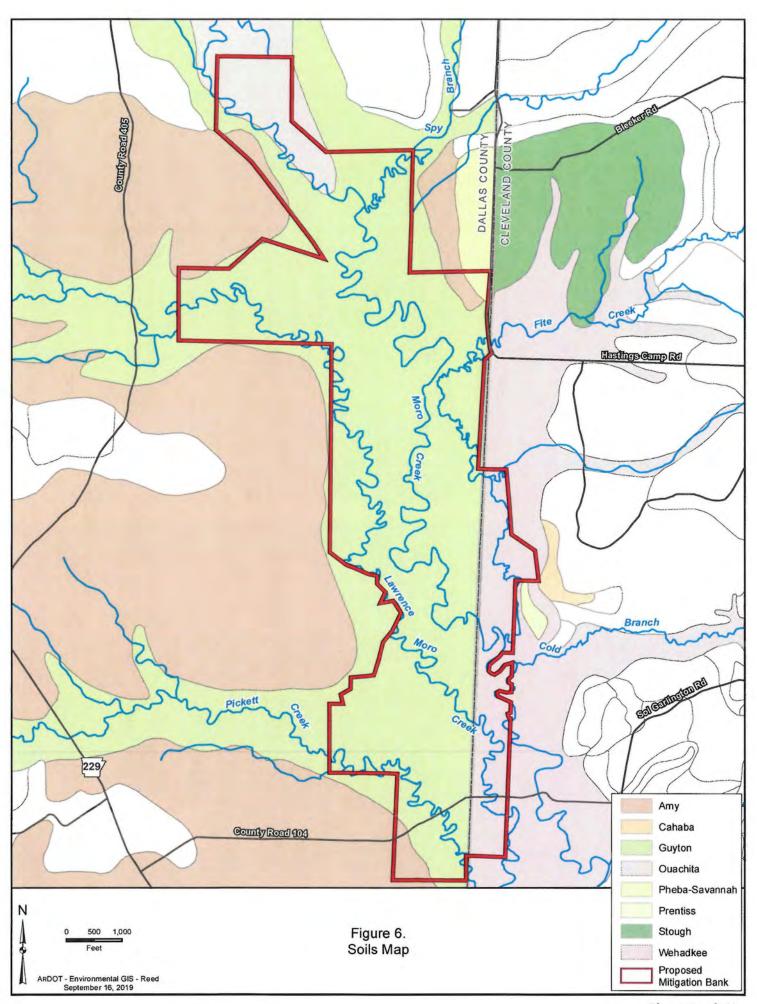






Sheet 3 of 5





Sheet 5 of 5

WETLAND DELINEATION OF THE PROPOSED MORO CREEK MITIGATION BANK CLEVELAND AND DALLAS COUNTIES

PREPARED BY:

ENVIRONMENTAL DIVISION

ARKANSAS DEPARTMENT OF TRANSPORTATION



TABLE OF CONTENTS

NTRODUCTION	4
PROPERTY LOCATION	4
WETLAND DELINEATION METHODOLOGY	5
HYDROPHYTIC VEGETATION	5
HYDRIC SOIL	6
WETLAND HYDROLOGY	6
GENERAL DESCRIPTION OF THE PROPERTY	6
WETLAND DELINEATION—FINDINGS	8
SUMMARY	9
APPENDIX A	. 11
Figure 1: Project Location Map	. 12
Figure 2: Topographic Map	. 13
Figure 3: Floodplain Map	. 14
Figure 4: Data Plots Map	.15
Figure 5: Wetland and Stream Locations Map	16
Figure 6: Soil Map	17
Figure 7: 1956 Historic Aerial Imagery Map	18
Appendix B: Photographs (6)	19
Appendix C: Data Sheets (82)	. 26

INTRODUCTION

The Arkansas Department of Transportation (ARDOT) delineated wetlands and assessed streams on the proposed Moro Creek Mitigation Bank site (944.40 acres) during September and October of 2018. The objective of the wetland and stream determination is to determine if waters of the United States; e.g., wetlands and streams, are present, and to what extent, on the proposed bank site. If so, the boundaries are identified and wetland acreages and stream lengths are calculated. This information will be used to calculate the generation of wetland and stream credits for the proposed Moro Creek Mitigation Bank in future documents.

The proposed property is owned by the ARDOT and is located in Cleveland and Dallas Counties, Arkansas. The wetland and stream determination was conducted by certified ARDOT personnel under the procedures outlined in the 1987 Corps of Engineers Wetland Delineation Manual in conjunction with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region. The identification of other waters of the United States on the proposed site is in accordance with the definitions in 33 CFR 328.3(a). All findings on the project site are not official until determined jurisdictional by the U.S. Army Corps of Engineers, Little Rock District.

PROPERTY LOCATION

The proposed mitigation bank site is located in Cleveland and Dallas Counties, Arkansas, approximately 1.0 mile east of Bunn, Arkansas. The proposed bank site is just east of Highway 229 and west of Highway 167. See Figure 1.

Proposed	USGS				
Site	Quadrangle	County	Sections	Township	Range
Moro Creek Mitigation Bank	Bunn	Cleveland	18, 19, & 30	8 South	13 West
Moro Creek Mitigation Bank	Bunn	Dallas	12, 13, 24, & 25	8 South	14 West

WETLAND DELINEATION METHODOLOGY

Wetlands are defined as those areas that are inundated or saturated by surface or groundwater 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, wet depressions, and similar habitats.

Wetlands are characterized by the following three parameters:

- 1. Hydrophytic Vegetation
- 2. Hydric Soils
- 3. Wetland Hydrology

HYDROPHYTIC VEGETATION

The "2016 National Wetland Plant List" was used to determine the wetland indicator status for all species identified within each plot. The indicator categories for vegetation are as follows:

- 1. **Obligate Wetland (OBL)** Occur almost always (estimated probability 99%) under natural conditions in wetlands.
- 2. **Facultative Wetland (FACW)** Usually occur in wetlands (estimated probability 67% to 99% occurrence in wetlands) but occasionally found in non-wetlands.
- 3. **Facultative (FAC)** Equally likely to occur in wetlands and non-wetlands with an estimated probability 34% to 64% occurrence.
- 4. **Upland (UPL)** Rarely occurs in wetlands, but occur almost always with an (estimated probability greater than 99%) under natural conditions in non-wetlands.

An area is defined to meet the required hydrophytic vegetation parameter when all dominant plant species are obligate, facultative wetland, or facultative, if utilizing the Rapid Test. The Dominance Test requires that more than 50% of the dominant species across all strata are obligate, facultative wetland, or facultative. If more uncertain

situations arise, the Prevalence Index can be utilized to determine if the vegetation is considered hydrophytic.

HYDRIC SOIL

Hydric soil indicators have been established to determine whether an area contains the required hydric soil parameters. Soil samples are pulled and the soil profile is documented on the wetland delineation data sheets. Munsell® Soil Color Charts are used to determine the matrix and mottle or redox feature colors of the soil. Other required soil characteristics, such as texture, are documented on the data sheets. The most common field indicator of hydric soils in the Atlantic Gulf Coastal Plain Region is the presence of a Depleted Matrix (F3).

WETLAND HYDROLOGY

Wetland hydrology is more specifically defined as flooding, ponding, or saturation to the surface for a long or very long duration during the growing season. A long duration is a single event that causes water to flood, pond, or saturate the soil and lasts 7 to 30 days. Very long duration is a single event that lasts more than 30 days. Wetland hydrology can also be defined as flooding, ponding, or saturation that occurs for 3% - 5% of the growing season. In this part of Arkansas, that would be a minimum of 14 consecutive days. Field indicators have been developed to document whether an area meets the mandatory criteria to establish if the required wetland parameter exist. The presence of surface water on any given day is insufficient to establish that an area is flooded, ponded, or saturated for 14 consecutive days. Other indicators have been established and used to assess the duration of soils saturation; e.g., water stained leaves, drift deposits, water marks, oxidized root channels, etc. Likewise, the absence of water on the date of wetland delineations does not mean that wetlands are not present. Most wetlands are dry during a portion of the year.

GENERAL DESCRIPTION OF THE PROPERTY

The proposed bank site is located in the west central portion of the Lower Ouachita River drainage basin—Lower Ouachita-Smackover watershed (8-digit HUC 08040201)—

in the Tertiary Uplands (Level IV Ecoregion, 35a) of the South Central Plains (Level III Ecoregion, 35). Potential natural vegetation is oak-hickory-pine forest. Mixed shortleaf pine-loblolly pine forest and upland deciduous forest is native. In riparian areas, potential natural vegetation is bottomland forest.

Native woody vegetation on the natural levees; i.e., those higher areas adjacent to streams, include: red maple (*Acer rubrum*) (FAC), ironwood (*Carpinus caroliniana*) (FAC), sweetgum (*Liquidambar styraciflua*) (FAC), deciduous holly (*Ilex decidua*) (FACW), blackgum (*Nyssa sylvatica*) (FAC), persimmon (*Diospyros virginiana*) (FAC), water oak (*Quercus nigra*) (FAC), cherrybark oak (*Quercus pagoda*) (FACW). Native woody vegetation remaining on the floodplains; e.g., backwater sloughs and wet depressional features, include: American holly (*Ilex opaca*) (FAC), willow oak (*Quercus phellos*) (FACW), water oak (*Quercus nigra*) (FAC), swamp chestnut oak (*Quercus michauxii*) (FACW), Nuttall's oak (*Quercus texana*) (FACW), cherrybark oak (*Quercus pagoda*) (FACW). In historical imagery from 1956, the proposed site is completely forested, see Figure 7.

Most of the bottomland hardwood forests in the floodplain areas were clear-cut, with the exception of some scattered forest patches that were too wet to log at the time. Some small strips of riparian forest remain along some of the streams, but riparian areas were also clear-cut. The clear-cut areas are dominated by warty panicgrass (*Panicum verrucosum*) (FACW), fowl mannagrass (*Glyceria striata*) (OBL), clammy hedgehyssop (*Gratiola neglecta*) (OBL), false nettle (*Boehmeria cylindrica*) (FACW), bearded beggarticks (*Bidens aristosa*) (FACW), cypress panicgrass (*Dichanthelium dichotomum*) (FAC), variable panicgrass (*Dichanthelium commutatum*) (FAC). Currently, adjacent properties are largely pine plantations and bottomland hardwood forests. Reforestation of the proposed property would re-establish habitat connectivity with adjacent bottomland hardwood forested areas.

The Natural Resource Conservation Service (NRCS) has mapped the following soils on the proposed site: Guyton soils, Amy silt loam, Wehadkee silt loam, Ouachita soils, and Pheba-Savannah association (Soil Survey of Calhoun and Dallas Counties, Arkansas 1980; Soil Survey of Cleveland County, Arkansas 1968). Guyton soils consist of very deep, poorly drained to very poorly drained, slowly permeable soils that formed in

thick loamy sediments. Guyton soils are typically found on Coastal Plain local stream floodplains and in depressional areas on late Pleistocene age terraces; slopes range from 0 to 1 percent (Guyton OSD 2019). Amy silt loam is described as very deep, poorly drained, slowly permeable soils that formed in alluvium high in silt. Amy soils are found on Pleistocene terraces in the Western and Southern Coastal Plains; slopes range from 0 to 3 percent (Amy OSD 2019). Wehadkee soils are described as very deep, poorly to very poorly drained that formed in loamy sediments. Wehadkee soils are typical soils on floodplains along streams that drain from the mountains and piedmont; slopes range from 0 to 2 percent (Wehadkee OSD 2019). Ouachita soils consist of deep, well drained, moderately slowly permeable soils that formed in loamy alluvium. These level to nearly level soils—slopes range from 0 to 3 percent—are on floodplains and natural levees along streams in the Western Coastal Plains (Ouachita OSD 2019). Pheba soils are described as deep, nearly level to very gently sloping somewhat poorly drained soils with moderately slowly permeability that formed in loamy sediments. Pheba soils are typical in broad uplands and terraces in the Southern Coastal Plains Major Land Resource Area; slopes range from 0 to 3 percent (Pheba OSD 2019). Savannah soils consist of very deep, moderately well drained, moderately slowly permeable soils that formed in loamy marine or fluvial terrace deposits. Savannah soils are typically found on uplands and terraces in the Southern Coastal Plain, where slopes range from 0 to 15 percent (Savannah OSD 2019). See Figure 6.

WETLAND DELINEATION AND STREAM ASSESSMENT - FINDINGS

In accordance with the 1987 Corps of Engineers Wetland Delineation Manual and the Atlantic Gulf Coastal Plain Regional Supplement, there were 533.0 acres of wetlands and 75,385.6 linear feet of stream identified on the proposed mitigation bank site. The wetlands are located on much of the proposed site and are located within the floodplains of several streams that traverse the property. The wetland types are collectively best described as riparian wetlands. Riparian wetlands are characterized as zones of deposition, where a typical broad floodplain contains several major wetland features: meander scrolls, oxbows, sloughs, and backswamps. Major expanses of riparian wetlands are called bottomland hardwood forests, many of which have been cleared and

drained (Mitsch and Gosselink 2000). There were two perennial streams (Moro Creek, Lawrence Moro Creek), two intermittent streams (Fite Creek, Picket Creek), and one ephemeral stream (Spy Branch) identified on the proposed mitigation bank site. See Figure 5.

Stream Name	Stream Type	Location	Linear Feet		
Moro Creek	Perennial	Northwest - Southeast	30,054.8		
Lawrence Moro Creek	Perennial	Northwest - Southeast	24,690.6		
Fite Creek	Intermittent	East side	9,470.4		
Picket Creek Intermittent		Southwest side	7,937		
Spy Branch	Ephemeral	Northeast side	3,232.8		

There was a total of 82 data sheets completed for the proposed bank site, see attached Data Sheets and Figure 4. The three parameters defined by the U.S. Army Corps of Engineers were used to determine the presence/absence and extent of wetlands on the proposed bank site.

SUMMARY

The wetland areas identified on the proposed bank site that total 533.0 acres. Stream length identified on the proposed bank site totaled 75,385.6 linear feet. The ARDOT would like to restore, enhance, and preserve the wetlands and riparian zones by removing stream crossings and planting bottomland hardwood tree species to create a mitigation bank on the proposed site.

LITERATURE CITED

- GILL, H.V., LARANCE, F.C., FULTZ, C.L., AND D.C. AVERY. 1980. Soil Survey of Calhoun and Dallas Counties, Arkansas. U.S. Dept. of Agriculture, Soil Conservation Service, in cooperation with the Arkansas Agricultural Experiment Station.
- LARANCE, F.C., JAY, J.E., ELDER, W.R., DANIELS, J.L., AND G.E. BARNUM. 1968. *Soil Survey of Cleveland County, Arkansas*. U.S. Dept. of Agriculture, Soil Conservation Service, in cooperation with the Arkansas Agricultural Experiment Station.
- MITSCH, W.J. AND J.G. GOSSELINK. 2000. Wetlands. Third Edition. John Wiley & Sons, Inc., New York, NY, USA.
- SOIL SURVEY STAFF, NATURAL RESOURCES CONSERVATION SERVICE, UNITED STATES

 DEPARTMENT OF AGRICULTURE. Official Soil Series Descriptions. Available online at https://soilseries.sc.egov.usda.gov/OSD_Docs/A/AMY.html. Accessed 1/18/2019.
- SOIL SURVEY STAFF, NATURAL RESOURCES CONSERVATION SERVICE, UNITED STATES DEPARTMENT OF AGRICULTURE. Official Soil Series Descriptions. Available online at https://soilseries.sc.egov.usda.gov/OSD_Docs/G/GUYTON.html. Accessed 1/18/2019.
- SOIL SURVEY STAFF, NATURAL RESOURCES CONSERVATION SERVICE, UNITED STATES DEPARTMENT OF AGRICULTURE. Official Soil Series Descriptions. Available online at https://soilseries.sc.egov.usda.gov/OSD_Docs/O/OUACHITA.html. Accessed 1/18/2019.
- SOIL SURVEY STAFF, NATURAL RESOURCES CONSERVATION SERVICE, UNITED STATES

 DEPARTMENT OF AGRICULTURE. Official Soil Series Descriptions. Available online at https://soilseries.sc.egov.usda.gov/OSD_Docs/P/PHEBA.html. Accessed 1/18/2019.
- SOIL SURVEY STAFF, NATURAL RESOURCES CONSERVATION SERVICE, UNITED STATES

 DEPARTMENT OF AGRICULTURE. Official Soil Series Descriptions. Available online
 at https://soilseries.sc.egov.usda.gov/OSD_Docs/S/SAVANNAH.html. Accessed 1/18/2019.
- SOIL SURVEY STAFF, NATURAL RESOURCES CONSERVATION SERVICE, UNITED STATES

 DEPARTMENT OF AGRICULTURE. Official Soil Series Descriptions. Available online
 at https://soilseries.sc.egov.usda.gov/OSD_Docs/W/WEHADKEE.html. Accessed 1/18/2019.

APPENDIX A

Project Location Map

Topographic Map

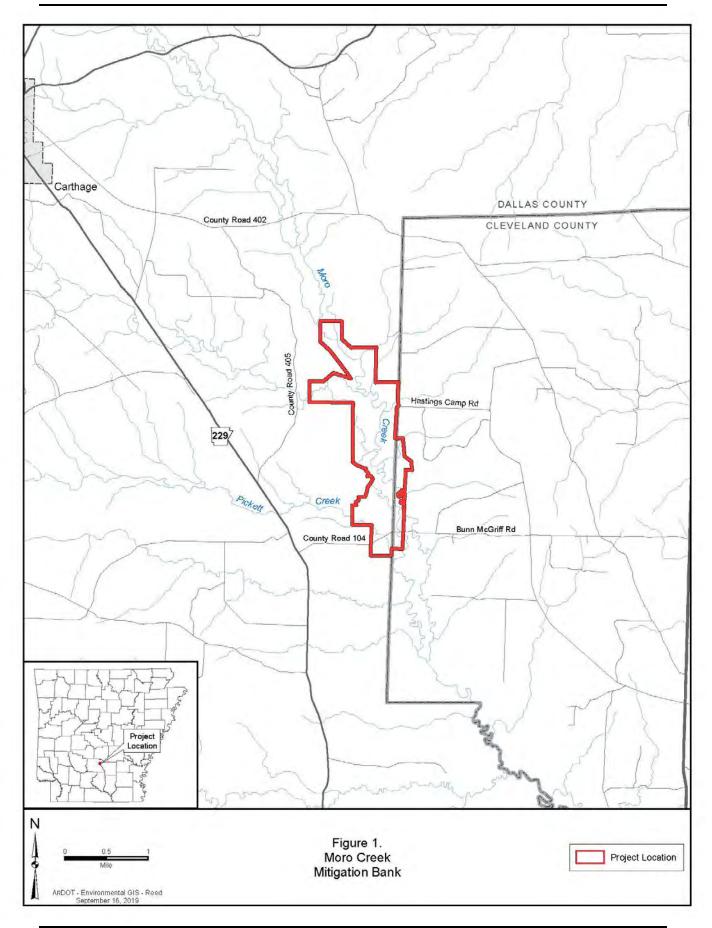
Floodplain Map

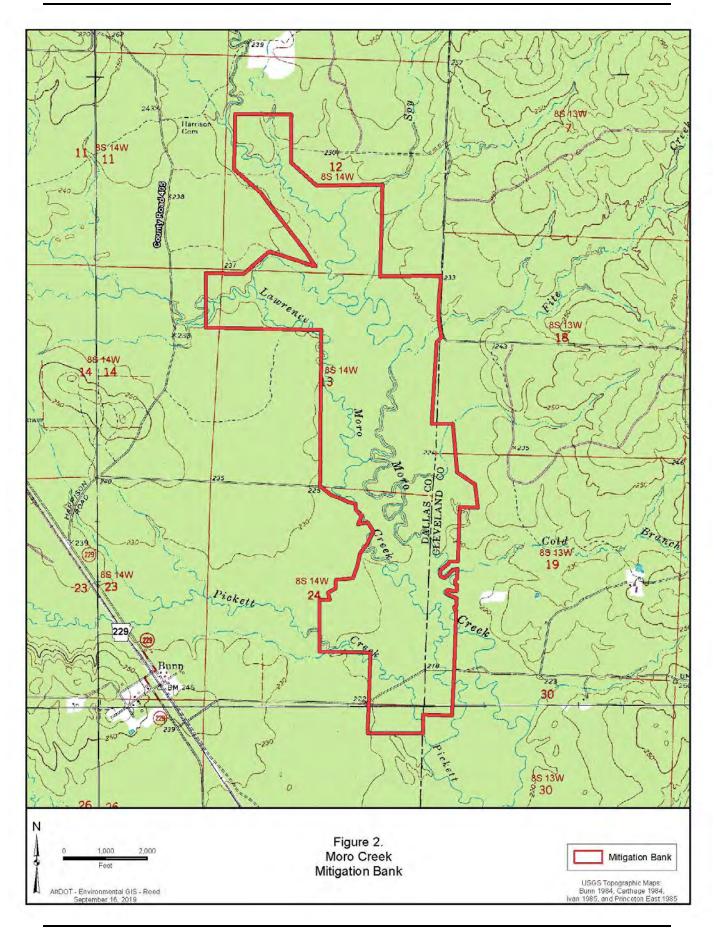
Data Plots Map

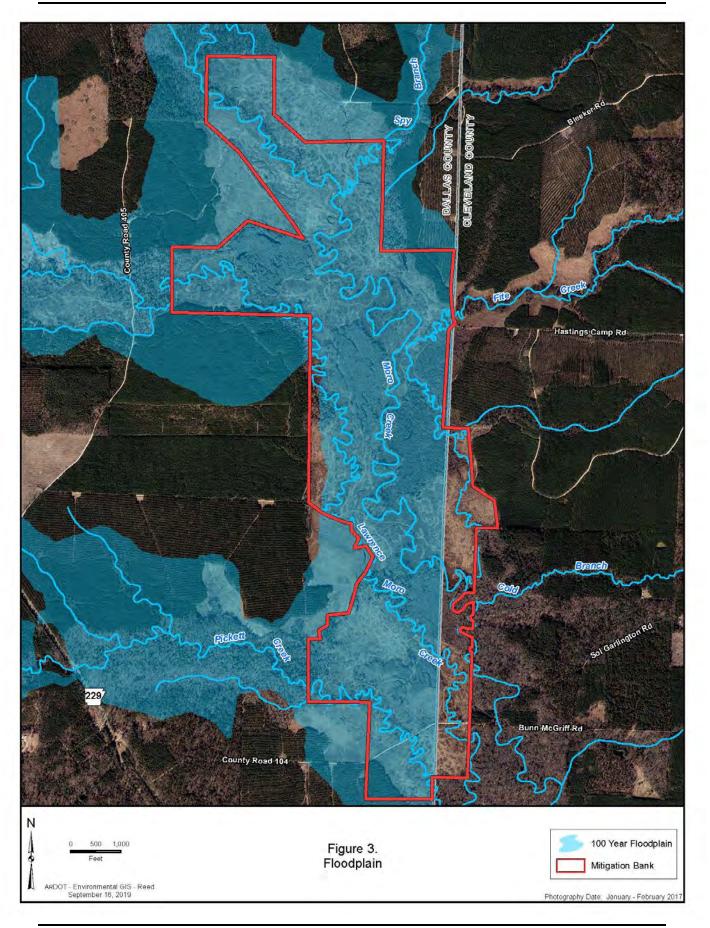
Wetland and Stream Location Map

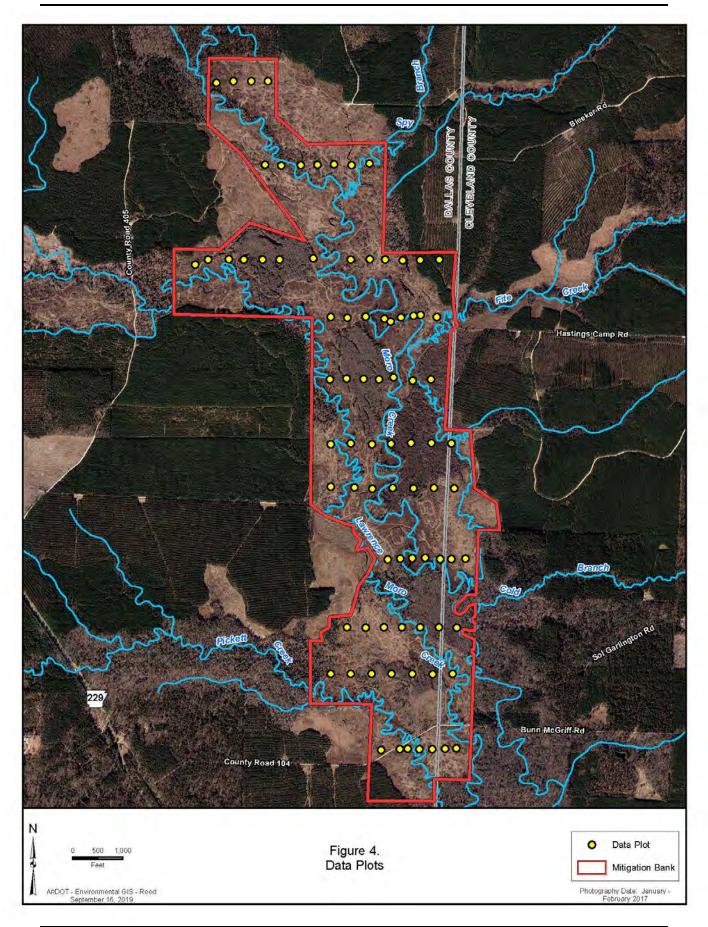
Soil Map

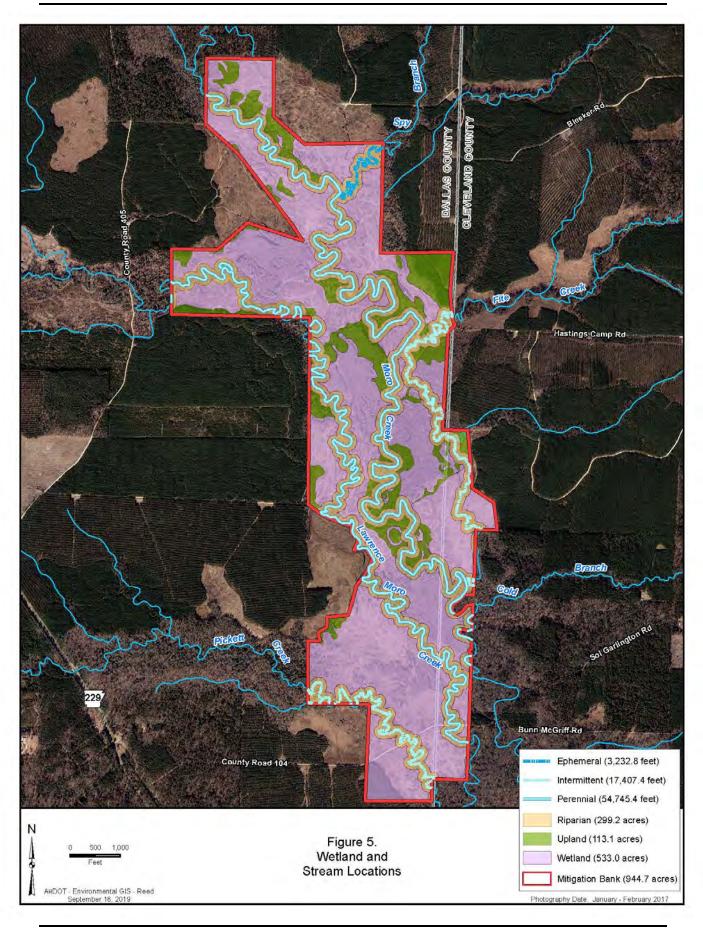
1956 Historic Aerial Imagery

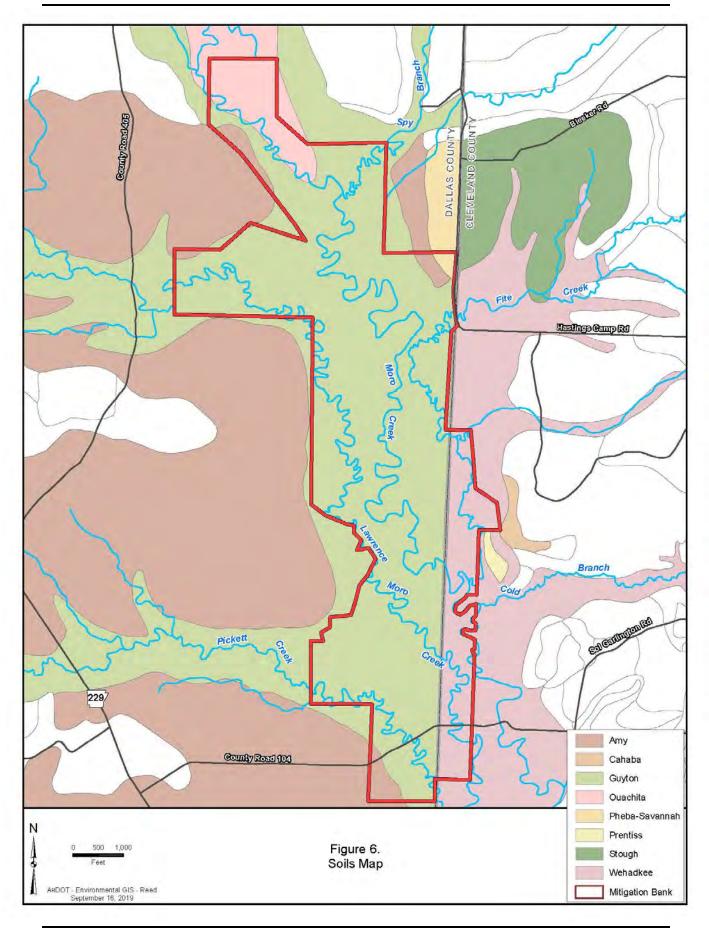


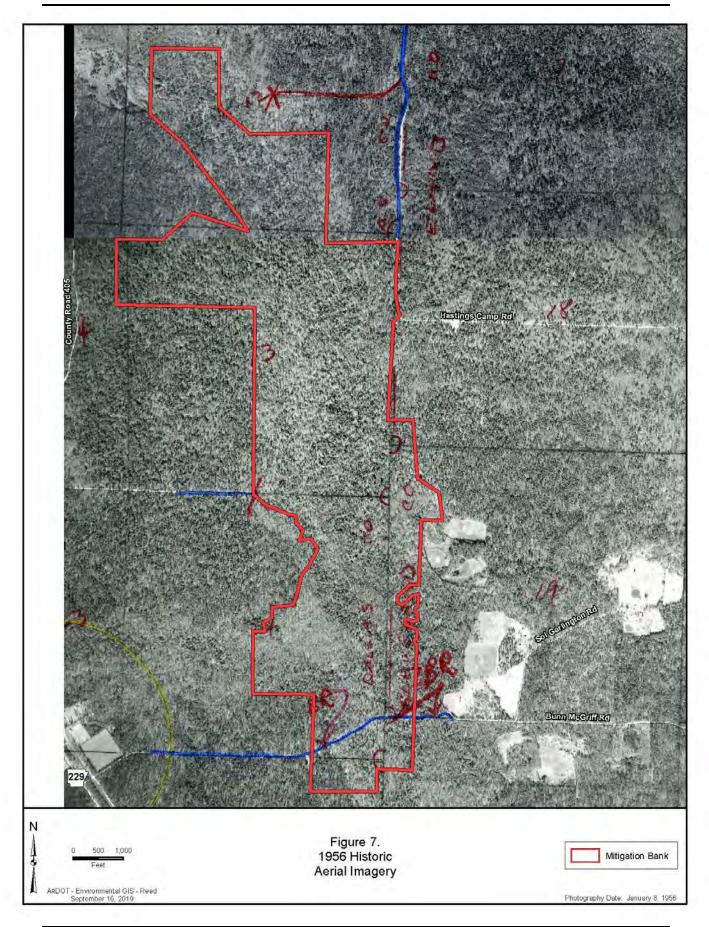












APPENDIX B

Photographs (6)



Typical view of herbaceous wetlands in the clear-cut areas.



Typical view of remaining bottomland hardwood forests.



Typical view of slough.



Typical view of backswamp.



Typical view of slough.



Typical view of streams.

APPENDIX C

Data Sheets (82)

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site	Moro Creek Mitigation Bank City/C			County:	Bunn/Dallas		Sampling Date:		2018/09/10		
Applicant/Owner:	Arkansas Department of Transportation			on State:	AR S		Sampling Point:		Plot 1		
Investigator(s): Kayti Ewing, Joe Ledvina					Section, Township, Range: T8S R14W S24				R14W S24		
Landform (hillslope	, terrace, etc	;.):	n	one	Local re	elief (conca	ive, convex	, none):		none	
Slope (%): 0	Lat:				Long:			Datum:		WGS84	
Soil Map Unit Name	e	We	hadkee	silt loam		NWI	Classificati	on:		PFO1A	
Are climatic/hydrolo	_				-		No	(If no,	explain	in remarks)	
Are vegetation										s" present?	
Are vegetation	, soil	, or	hydrolo	ogynat	urally problen	natic?		res X		lo	
							•	-	-	swers in Remarks.)	
SUMMARY OF FI					pling point l	ocations,	transects,	importar	nt featu	ires, etc.	
Hydrophytic vegeta	-			_ No							
Hydric soil present?		Yes		_ No	Is the samp						
Wetland hydrology	present?	Yes	<u> </u>	No	within a we	tland?	Yes	X	N	lo	
Remarks: (Explain	aiternative p	ocedures ne	ae or in	r a separate n	eport.)						
HYDROLOGY											
Wetland Hydrolog	y Indicators	ş:					Secondary	y Indicator	s (minin	num of two required)	
Primary Indicators ((minimum of	one is requir	red; che	ck all that ap	ply)		Surf	ace Soil Cı	racks (B6	6)	
X Surface Water (A	A1)			_Aquatic Fau	na (B13)		Sparsely Vegetated Concave Surface (B8				
X High Water Tabl	le (A2)			Marl Depos	its (B15) (LRI	₹ U)	Drainage Patterns (B10)				
			Hydrogen S				ss Trim Lines (B16)				
Water Marks (D1)			Oxidized Rh	Oxidized Rhizospheres on Living Dry-			r-Season Water Table (C2)				
Sediment Deposits (B2)			Roots (C3)		Living	Crayfish Burrows (C8)					
Drift Deposits (B3)				Presence of Reduced Iron (C4)			Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)				Recent Iron	Reduction in T	ion in Tilled X Geon			omorphic Position (D2)		
Iron Deposits (B5)			Soils (C6)	Treduction in Tilled			allow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7)			Thin Muck S	urface (C7) X FAC		AC-Neutral Test (D5)					
Water-Stained Leaves (B9)				Other (Expla	ain in Remarks	s) Sphagnum m			oss (D8) (LRR T, U)		
Field Observations	 s:			_							
Surface water prese		′es X	No	Depth	(inches) 12	2	We	etland hyd	drology	present?	
Water table present		es X	- No		(inches) 0			,	0,	•	
Saturation present?		es X	No		(inches) 0		Yes	X	No		
(includes capillary f			-		` '		-				
Describe recorded		gauge, mor	nitorina '	well. aerial ph	notos, previou	s inspection	ns). if availa	able:			
			J	, '		'	,				
Remarks:											
			!	standing w	ater 6" to 1	18" deep					

VEGETATION	Use	scientific	names	of	plants.
-------------------	-----	------------	-------	----	---------

/EGETATION Use scientific names of plan	ts.			Sampling Point: Plot 1
	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	Number of Dominant Species
1 Nyssa sylvatica	2	N	FAC	that are OBL, FACW, or FAC: 4 (A)
2				Total Number of Dominant
3				Species Across all Strata: 4 (B)
4				
5				Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)
6				(148)
7				Prevalence Index Worksheet
0				Total % Cover of:
0	2	Total Cove		
50% of total cover:		of total cover		OBL species 17 x 1 = 17 FACW species 6 x 2 = 12
	2070 C	i lulai cuvei	. 0.4	<u> </u>
Sapling/Shrub Stratun (Plot size: 15-m radius	,		540	<u> </u>
1 Nyssa sylvatica	2	<u>N</u>	FAC	FACU species 0 x 4 = 0
2				UPL species x 5 =
3				Column totals 36 (A) 68 (B)
4				Prevalence Index = B/A = 1.89
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				X 3 - Prevalence index is ≤3.0*
	2	Total Cove	r	4 - Morphogical adaptations* (provide
	1 20% c	of total cover	0.4	supporting data in Remarks or on a
Herb Stratum (Plot size: 1m²)			separate sheet)
1 Ludwigia palustris	8	Υ	OBL	Problematic hydrophytic vegetation*
2 Saururus cernuus	5	Υ	OBL	(explain)
3 Rhynchospora corniculata	2	N	OBL	*Indicators of hydric soil and wetland hydrology must be
4 Glyceria striata	1	N	OBL	present, unless disturbed or problematic
5 Gratiola neglecta	1	N	OBL	Definitions of Four Vegetation Strata:
6 Pluchea camphorata	1	N	FACW	
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8				or more in diameter at breast height (DBH),
9				regardless of height.
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12				equal to 3.28 ft (1 m) tall
	18 :	Total Cove		Herb – All herbaceous (non-woody) plants,
50% of total cover:		of total cover		regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius	2070 0	n total cover		ft tall
1 Smilax rotundifolia	, 7	Υ	FAC	Woody Vine – All woody vines greater than 3.28 ft
	5	<u> </u>	FACW	in height.
	2			in neight.
3 Vitis rotundifolia		<u>N</u>	FAC	
4				
5				
6				Hydrophytic
		Total Cove		vegetation
50% of total cover:	7 20% c	of total cover	2.8	present? Yes X No
Remarks: (Include photo numbers here or on a separ	ate sheet)			

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the inc	dicator o	r confi	rm the absence of ind	licators.)		
Depth	Matrix	Redo	ox Features	3						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 4	10YR 5/2	95	10YR 5/8	5	С	PL	silty clay loam			
4 - 6	10YR 5/2	98	10YR 5/8	2	С	PL	silty clay loam			
6 - 10	10YR 5/1	60	7.5YR 5/8	40	С	PL	silty clay loam	Mn/Fe concretions		
¹ Type: C = 0	Concentration, D = D	epletion, RM	l = Reduced Matrix,	MS = Mask	ed Sand	Grains	s. ² Location: PL = P	ore Lining, M = Matrix		
Hydric Soil	Indicators:		Polyvalue Below	/ Surface (S	S8)		Indicators for Probler	•		
Histisol	•	-	(LRR S, T, U)				1 cm Muck (A10) (I	· ·		
	pipedon (A2)	-	Thin Dark Surface				2 cm Muck (A10) (I	LRR S)		
	istic (A3)	-	Loamy Mucky M		(LRR O)		Reduced Vertic (F			
─ ' '	en Sulfide (A4)	-	Loamy Gleyed N				(outside MLRA 15	60A, B)		
	d Layers (A5)	. .	X Depleted Matrix Redox Dark Sur	,			Piedmont Floodpla	in Soils (F19)		
	: Bodies (A6) (LRR P ucky Mineral (A7) (L l	Depleted Dark Sur	` '	`	-	 `	_(LRR P, S, T)			
	. , ,	X Redox Depressi	-	,		Anomalous Bright I (MLRA 153B)	Loamy Soils (F20)			
Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P. T) Marl (F10				` '		-	Red Parent Materia	al (TF12)		
	d Below Dark Surfac	e (A11)	Depleted Ochric	•	RA 151)		Very Shallow Dark	· ·		
	ark Surface (A12)	_	' Iron-Manganese		-	•	Other (explain in re	·		
	rairie Redox (A16)		X (LRR O, P, T)	, Masses (1	12)	-		,		
(MLRA		-	Umbric Surface	(F13) (LRF	R P, T, U)					
Sandy I	Mucky Mineral (S1)	-	Delta Ochric (F1	7) (MLRA	151)		2			
(LRR [°] O			Reduced Vertic				 Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic 			
Sandy (Gleyed Matrix (S4)	-	Piedmont Flood	plain Soils	(F19) (M L	-RA 14				
Sandy F	Redox (S5)		Anomalous Brig							
	d Matrix (S6)	-	(MLRA 149A, 1	53C, 153D))					
Dark Su	ırface (S7) (LRR P, S	S, T, U)								
Restrictive	Layer (if observed)	:								
Туре:	,									
Depth (inch	es):			Hydric soi	l present	t?	Yes X	No		
Remarks:			<u> </u>				<u> </u>			
Remarks.										

Project/Site	Moro Creek M	litigation Bar	nk	City/County:	Bunn	S	Sampling Date	2018/09/10
Applicant/Owner:	Arkansas	Department -	of Transp	ortation State		s	ampling Point	Plot 2
Investigator(s):	Kayti	i Ewing, Joe	Ledvina	Se	ction, Townshi	p, Range:	T8:	S R14W S24
Landform (hillslope	terrace, etc.):		none	Loca	al relief (conca	ve, convex,	none):	none
Slope (%): 0	Lat:	'		Long:			Datum:	WGS84
Soil Map Unit Name		Wehad	kee silt lo	am	NWI	Classificatio	n:	PFO1A
Are climatic/hydrolo	gic conditions of	of the site typi	ical for this	s time of the year	? Yes X N	lo	(If no, expla	ain in remarks)
Are vegetation	X , soil	, or hyd	drology	significantly d	isturbed?	Are "norn	nal circumstan	nces" present?
Are vegetation	, soil	, or hyd	drology	naturally prob	lematic?	Y	es X	No
						(If needed	d, explain any	answers in Remarks.)
SUMMARY OF FI	NDINGS - Atta	ich site map	showing	g sampling poir	t locations, t	ransects, i	mportant fea	atures, etc.
Hydrophytic vegeta	tion present?	Yes	X No					
Hydric soil present?	,	Yes	X No	Is the sa	mpled area			
Wetland hydrology	present?	Yes	X No	within a	wetland?	Yes_	Х	No
Remarks: (Explain a	alternative proc	edures here	or in a sep	arate report.)				
HYDROLOGY								
Wetland Hydrolog	y Indicators:					Secondary	Indicators (mi	inimum of two required)
Primary Indicators (minimum of one	e is required;	check all	that apply)		Surfa	ce Soil Cracks	(B6)
Surface Water (A	41)		Aqua	itic Fauna (B13)		Spars	sely Vegetated	Concave Surface (B8)
High Water Tabl	e (A2)		Marl	Deposits (B15) (I	-RR U)	Drain	age Patterns (E	B10)
Saturation (A3)			Hydr	ogen Sulfide Odor	(C1)	Moss	Trim Lines (B1	16)
Water Marks (B	1)		Oxidi	zed Rhizospheres	on Livina	Dry-S	Season Water T	rable (C2)
Sediment Depos	sits (B2)			s (C3)		Crayf	ish Burrows (C	8)
Drift Deposits (B	3)		Pres	ence of Reduced I	on (C4)	Satur	ation Visible or	n Aerial Imagery (C9)
Algal Mat or Cru	st (B4)		Rece	ent Iron Reduction	n Tilled	X Geom	norphic Position	n (D2)
Iron Deposits (B	5)			(C6)		Shalld	ow Aquitard (D	3)
Inundation Visib	le on Aerial Imaç	gery (B7)	Thin	Muck Surface (C7)	X FAC-	Neutral Test (D)5)
Water-Stained L	eaves (B9)		Othe	r (Explain in Rema	rks)	Spha	gnum moss (Da	8) (LRR T, U)
Field Observations	s:							
Surface water prese		1	No X	Depth (inches)		Wet	land hydrolo	av present?
Water table present				Depth (inches)			,	37 p
Saturation present?				Depth (inches)		Yes	X I	No
(includes capillary f				,		_		
Describe recorded	<u> </u>	uge, monitori	ing well. a	erial photos, prev	ious inspection	ns), if availat	ole:	
	, ,	0 /	,		•	,,		
Remarks:								

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 2 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) **Percent of Dominant Species** that are OBL, FACW, or FAC: 100.00% (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **12** x 1 = 20% of total cover: **FACW** species 50% of total cover: 77 x 2 =154 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species 10 x 3 = 30 FACU species 16 64 1 Quercus pagoda **FACW** x 4 = FACU **UPL** species Quercus macrocarpa 0 x 5 = 0 Column totals llex opaca FAC **115** (A) 260 Prevalence Index = B/A = 2.26 4 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation X 2 - Dominance test is >50% X 3 - Prevalence index is ≤3.0* = Total Cover 4 - Morphogical adaptations* (provide 50% of total cover: 20% of total cover: 8.0 supporting data in Remarks or on a Herb Stratum (Plot size: separate sheet) Problematic hydrophytic vegetation* 1 Boehmeria cylindrica **FACW** (explain) Eupatorium capillifolium 15 **FACU** 12 Steinchisma hians OBL *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic 5 **Definitions of Four Vegetation Strata:** Tree – Woody plants, excluding vines, 3 in. (7.6 cm) 7 or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall = Total Cover Herb - All herbaceous (non-woody) plants, 102 regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: **20.4** (Plot size: 15-m radius) Woody Vine Stratum Vitis rotundifolia **FAC** Woody Vine – All woody vines greater than 3.28 ft **FAC** in height. Bignonia capreolata **FAC** Smilax rotundifolia 4 5

9

4.5

= Total Cover

20% of total cover: 1.8

Remarks: (Include photo numbers here or on a separate sheet)

50% of total cover:

Yes X No

Hydrophytic

vegetation

present?

Hydric Soil Indicators: Histisol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Histic Soil Indicators for Problem 1 cm Muck (A10) (1 cm Muck (A10) (2 cm Muck (A10) (3 cm Muck (A10) (4 cm Muck (A	(LRR O) (LRR S) (18) 50A, B) ain Soils (F19) Loamy Soils (F20)				
1 - 4 10YR 5/2 90 10YR 5/8 10 C PL silty clay loam 4 - 10 10YR 4/2 98 7.5YR 4/6 2 C M silty clay loam Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A10) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (1 cm Muck (A1	matic Hydric Soils ³ : (LRR O) (LRR S) (18) 50A, B) ain Soils (F19) Loamy Soils (F20)				
4 - 10 10YR 4/2 98 7.5YR 4/6 2 C M silty clay loam Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. Hydric Soil Indicators: Histisol (A1) Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A7) (LRR P, T, U) Sepleted Matrix (F3) Piedmont Floodpla (LRR P, S, T) Sepleted Dark Surface (F7) Muck Presence (A8) (LRR U) Anomalous Bright (MLRA 153B) Tem Muck (A9) (LRR P, T) Depleted Dark Oric (F11) (MLRA 151) Perpleted Dark Oric (F11) (MLRA 151) Perpleted Dark Oric (F11) (MLRA 151) Perpleted Dark Oric (F11) (MLRA 151) Perpleted Dark Oric (F11) (MLRA 151) Perpleted Dark Oric (F11) (MLRA 151) Perpleted Dark Oric (F11) (MLRA 151) Perpleted Dark Oric (F11) (MLRA 151)	matic Hydric Soils ³ : (LRR O) (LRR S) (18) 50A, B) ain Soils (F19) Loamy Soils (F20)				
Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. Polyvalue Below Surface (S8) Histisol (A1) Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A8) (LRR P, T, U) Stratified Layers (A8) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A8) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A8) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A8) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR U) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark	matic Hydric Soils ³ : (LRR O) (LRR S) (18) 50A, B) ain Soils (F19) Loamy Soils (F20)				
Hydric Soil Indicators: Histisol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) Thin Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F (outside MLRA 15 (LRR P, T, U) Piedmont Floodpla (LRR P, S, T) Anomalous Bright (MLRA 153B) Red Parent Materi Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark	matic Hydric Soils ³ : (LRR O) (LRR S) (18) 50A, B) ain Soils (F19) Loamy Soils (F20)				
Hydric Soil Indicators: Histisol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A10) (Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F (outside MLRA 15 Loamy Gleyed Matrix (F2) Medox Dark Surface (F6) Depleted Dark Surface (F7) Anomalous Bright (MLRA 153B) Red Parent Materi Very Shallow Dark	matic Hydric Soils ³ : (LRR O) (LRR S) (18) 50A, B) ain Soils (F19) Loamy Soils (F20)				
Hydric Soil Indicators: Histisol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A10) (Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F (outside MLRA 15 Loamy Gleyed Matrix (F2) Medox Dark Surface (F6) Depleted Dark Surface (F7) Anomalous Bright (MLRA 153B) Red Parent Materi Very Shallow Dark	matic Hydric Soils ³ : (LRR O) (LRR S) (18) 50A, B) ain Soils (F19) Loamy Soils (F20)				
Hydric Soil Indicators: Histisol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) Thin Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F (outside MLRA 15 (LRR P, T, U) Piedmont Floodpla (LRR P, S, T) Anomalous Bright (MLRA 153B) Red Parent Materi Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark	matic Hydric Soils ³ : (LRR O) (LRR S) (18) 50A, B) ain Soils (F19) Loamy Soils (F20)				
Hydric Soil Indicators: Histisol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A10) (Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F (outside MLRA 15 Loamy Gleyed Matrix (F2) Medox Dark Surface (F6) Depleted Dark Surface (F7) Anomalous Bright (MLRA 153B) Red Parent Materi Very Shallow Dark	matic Hydric Soils ³ : (LRR O) (LRR S) (18) 50A, B) ain Soils (F19) Loamy Soils (F20)				
Hydric Soil Indicators: Histisol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A10) (Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F (outside MLRA 15 Loamy Gleyed Matrix (F2) Medox Dark Surface (F6) Depleted Dark Surface (F7) Anomalous Bright (MLRA 153B) Red Parent Materi Very Shallow Dark	matic Hydric Soils ³ : (LRR O) (LRR S) (18) 50A, B) ain Soils (F19) Loamy Soils (F20)				
Hydric Soil Indicators: Histisol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A10) (Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F (outside MLRA 15 Loamy Gleyed Matrix (F2) Medox Dark Surface (F6) Depleted Dark Surface (F7) Anomalous Bright (MLRA 153B) Red Parent Materi Very Shallow Dark	matic Hydric Soils ³ : (LRR O) (LRR S) (18) 50A, B) ain Soils (F19) Loamy Soils (F20)				
Hydric Soil Indicators: Histisol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A10) (Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F (outside MLRA 15 (lRR P, T, U) Depleted Dark Surface (F6) Marl (F10) (LRR U) Marl (F10) (LRR U) Depleted Dark Surface (F11) (MLRA 151) Red Parent Materi Very Shallow Dark	matic Hydric Soils ³ : (LRR O) (LRR S) (18) 50A, B) ain Soils (F19) Loamy Soils (F20)				
Histisol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A10) (Reduced Vertic (F (outside MLRA 15 (LRR P, T, U) Depleted Dark Surface (F6) Marl (F10) (LRR U) Redox Dark Surface (F7) Anomalous Bright (MLRA 153B) Red Parent Materi Very Shallow Dark Very Shallow Dark	(LRR O) (LRR S) (18) 50A, B) ain Soils (F19) Loamy Soils (F20)				
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P. T) Depleted Dark Surface (F1) (MLRA 151) Marl (F10) (LRR U) Marl (F10) (LRR U) Thin Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F (outside MLRA 15 (outside MLRA 15 (outside MLRA 15 (outside MLRA 15 (cutside ML	(LRR S) 518) 50A, B) ain Soils (F19) Loamy Soils (F20)				
Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P. T) Depleted Dark Surface (F6) Marl (F10) (LRR U) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Reduced Vertic (F (outside MLRA 15 (outside MLRA 15 (pledmont Floodpla (LRR P, S, T) Anomalous Bright (MLRA 153B) Red Parent Materi Very Shallow Dark	518) 50A, B) ain Soils (F19) Loamy Soils (F20)				
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P. T) Depleted Dark Surface (F6) Marl (F10) (LRR U) Marl (F10) (LRR U) Depleted Dark Surface (F7) Marl (F10) (LRR U) Redox Dark Surface (F7) Anomalous Bright (MLRA 153B) Red Parent Materi Very Shallow Dark Thirt Body On (A40)	50A, B) ain Soils (F19) Loamy Soils (F20)				
Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P. T) Depleted Dark Surface (F6) Marl (F10) (LRR U) Marl (F10) (LRR U) Depleted Dark Surface (F7) Anomalous Bright (MLRA 153B) Red Parent Materi Very Shallow Dark Third Public Office (A40)	ain Soils (F19) Loamy Soils (F20)				
Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P. T) Depleted Dark Surface (F7) Redox Depressions (F8) Marl (F10) (LRR U) Red Parent Materi Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Other (A40)	Loamy Soils (F20)				
Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P. T) Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Wery Shallow Dark					
Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P. T) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Warl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Other (A12)					
Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark	_ `				
	ial (TF12)				
Thick Dark Surface (A12) Iron-Manganese Masses (F12) Other (explain in re	⟨ Surface (TF12)				
	emarks)				
Coast Prairie Redox (A16) (LRR O, P, T)					
(MLRA 150A) Umbric Surface (F13) (LRR P, T, U)					
Sandy Mucky Mineral (S1) Delta Ochric (F17) (MLRA 151)					
(LRK 0, 5) Reduced Vertic (F 10) (MLKA 150A, 150F	³ Indicators of hydrophytic vegetation and weltand hydrology must be				
Sandy Gleyed Matrix (S4) Piedmont Floodplain Soils (F19) (MLRA 149A) present, unless dis	sturbed or				
Sandy Redox (S5) Anomalous Bright Loamy Soils (F20) problematic					
Stripped Matrix (S6) (MLRA 149A, 153C, 153D)					
Dark Surface (S7) (LRR P, S, T, U)					
Restrictive Layer (if observed):					
Гуре:					
Depth (inches): Hydric soil present? Yes X	No				
Remarks:					

Project/Site	Moro Creek Mitig	ation Bank	City/	County:	Bunn	Sampling Da	ate: 2018/09/10
Applicant/Owner:	Arkansas Dep	artment of T	ransportatio	n State:	AR	Sampling Po	oint: Plot 3
Investigator(s):	Kayti Ew	ring, Joe Led	lvina	Section, Township, Range:			T8S R14W S24
Landform (hillslope	, terrace, etc.):	n	one	Local relief	(concave, conve	ex, none):	none
Slope (%): 0	Lat:			Long:		Datum:	WGS84
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Classific	ation:	PFO1A
Are climatic/hydrolo	ogic conditions of th	e site typical	for this time o	of the year? Yes _	X No	(If no, ex	xplain in remarks)
Are vegetation	X , soil	, or hydrolo	ogysigr	nificantly disturbed	d? Are "n	normal circums	stances" present?
Are vegetation	, soil	, or hydrolo	ogynat	urally problematic		Yes X	
					•	· ·	any answers in Remarks.)
SUMMARY OF FI			owing samp	oling point locat	ions, transect	ts, important	features, etc.
Hydrophytic vegeta	*	Yes X	No				
Hydric soil present?		Yes X	No	Is the sampled			
Wetland hydrology	present?	Yes X	No	within a wetlan	id? Ye	es <u>X</u>	No
Remarks: (Explain	alternative procedu	res here or in	a separate re	eport.)			
HYDROLOGY							
Wetland Hydrolog	y Indicators:				Second	lary Indicators	(minimum of two required)
Primary Indicators ((minimum of one is	required; che	ck all that ap	ply)		urface Soil Crac	• • •
Surface Water (A1)		Aquatic Faur	na (B13)			ted Concave Surface (B8)
High Water Tab	le (A2)		Marl Deposi	its (B15) (LRR U)		rainage Pattern	
Saturation (A3)	, ,		Hydrogen Sı	ulfide Odor (C1)		loss Trim Lines	
Water Marks (B	1)		_	izospheres on Livir	D	ry-Season Wate	er Table (C2)
Sediment Depos			Roots (C3)	izospileres on Livii	9	rayfish Burrows	
Drift Deposits (B				Reduced Iron (C4)		-	e on Aerial Imagery (C9)
Algal Mat or Cru	ust (B4)		Pocont Iron	Reduction in Tilled	X G	eomorphic Posi	ition (D2)
Iron Deposits (B	, ,		Soils (C6)	Reduction in Tilled		hallow Aquitard	
Inundation Visib	le on Aerial Imagery	(B7)	Thin Muck S	urface (C7)		AC-Neutral Test	
Water-Stained L	eaves (B9)		_	in in Remarks)	S	phagnum moss	(D8) (LRR T, U)
Field Observation							
Surface water prese		No	X Depth	(inches)	,	Wetland hydro	ology present?
Water table presen		No	X Depth	· · · · · · · · · · · · · · · · · · ·		,	, , , , , , , , , , , , , , , , , , ,
Saturation present?	_	No	X Depth	· · · · · · · · · · · · · · · · · · ·	Yes	X	No
(includes capillary f				,			
	data (stream gauge	. monitoring \	well, aerial ph	otos, previous ins	pections), if ava	ailable:	
	aata (ett eatti gaage	,g .	, a.o., a.		p = = = = = = = = = = = = = = = = = = =		
Remarks:							

Sampling Point:

Plot 3

Profile Des	cription: (Describe	to the depth	n needed to docum	ent the inc	dicator o	r confi	irm the absence of ind	icators.)		
Depth	Matrix		Redo	ox Features	3					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 6	10YR 3/2	98	10YR 5/6	2	С	М	silty clay loam			
6 - 12	10YR 4/2	96	10YR 4/4	2	С	М	silty clay loam			
			10YR 5/6	2	С	М				
¹ Type: C = 0	Concentration, D = D	epletion, RM	= Reduced Matrix,	⊔ MS = Mask	ced Sand	Grains	s. ² Location: PL = P	ore Lining, M = Matrix		
	Indicators:	,					Indicators for Probler			
Histisol			Polyvalue Below (LRR S, T, U)	V Surface (50)		1 cm Muck (A10) (I	_		
	pipedon (A2)	-	Thin Dark Surfa	ce (S9) (LF	RR S. T. U	J)	2 cm Muck (A10) (I	·		
_	istic (A3)	-	— Loamy Mucky M				Reduced Vertic (F			
	en Sulfide (A4)	=	Loamy Gleyed N				(outside MLRA 15	•		
	d Layers (A5)	_	X Depleted Matrix	(F3)		i	—— · Piedmont Floodpla	in Soils (F19)		
Organio	Bodies (A6) (LRR P	Redox Dark Sur	face (F6)			(LRR P, S, T)				
5 cm M	ucky Mineral (A7) (L l	Depleted Dark S	Surface (F7)	•	Anomalous Bright I	Anomalous Bright Loamy Soils (F20)			
				ons (F8)			(MLRA 153B)	, ('')		
1 cm M	1 cm Muck (A9) (LRR P. T) Marl					•	Red Parent Materia	al (TF12)		
Deplete	d Below Dark Surfac	e (A11)	Depleted Ochric	(F11) (ML	RA 151)	•	Very Shallow Dark	Surface (TF12)		
Thick D	ark Surface (A12)	_	Iron-Manganese	e Masses (F	- 12)		Other (explain in re	marks)		
Coast F	Prairie Redox (A16)	_	(LRR O, P, T)	`	,	•				
(MLRA		_	Umbric Surface	(F13) (LRF	R P, T, U))				
Sandy I	Mucky Mineral (S1)	_	Delta Ochric (F1	17) (MLRA	151)		3, ,, , , , ,			
(LRR O			Reduced Vertic				 Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic 			
Sandy (Gleyed Matrix (S4)	_	Piedmont Flood	plain Soils	(F19) (M I	LRA 14				
Sandy I	Redox (S5)		Anomalous Brig							
Strippe	d Matrix (S6)	_	(MLRA 149A, 1	53C, 153D))					
Dark Su	ırface (S7) (LRR P, \$	S, T, U)								
Restrictive	Layer (if observed)) <u>:</u>								
Type:	_u , c. (c.cccu,	,-								
Depth (inch	es):			Hydric soi	l presen	t?	Yes X	No		
Remarks:										

Project/Site	Moro Creek M	litigation Ba	ank	City/	County:	Bunn	Sar	npling Date:	2018/09/10
Applicant/Owner:	Arkansas	Department	of Trar	nsportatio	n State:	AR	San	Plot 4	
Investigator(s):	Kayti	i Ewing, Joe	e Ledvir	na	Section,	Township, R	Range:	T8S	R14W S24
Landform (hillslope	terrace, etc.):		non	е	Local relief	(concave, d	convex, no	ne):	none
Slope (%): 0	Lat:				Long:		Dat	um:	WGS84
Soil Map Unit Name	e	Weha	dkee sil	t loam		NWI Clas	ssification:		PFO1A
Are climatic/hydrolo	gic conditions of	of the site typ	oical for	this time o	of the year? Yes	X No		(If no, explai	in in remarks)
Are vegetation	X , soil	X , or hy	drology	sign	nificantly disturbe	ed? A	re "norma	l circumstand	es" present?
Are vegetation	, soil	, or hy	drology	nat	urally problemati	c?	Yes	<u>X</u>	No
								-	answers in Remarks.)
SUMMARY OF FI		ach site ma	p show	ving samp	oling point loca	tions, tran	sects, im	portant feat	tures, etc.
Hydrophytic vegeta	-	Yes_		No					
Hydric soil present?		Yes_	X	No	Is the sample				
Wetland hydrology	present?	Yes_	<u>X</u>	No	within a wetla	nd?	Yes	X	No
Remarks: (Explain	alternative proc	edures here	or in a	separate re	eport.)				
HYDROLOGY									
Wetland Hydrolog	y Indicators:					Sed	condary In	dicators (min	imum of two required)
Primary Indicators (minimum of on	e is required	l; check	all that app	ply)	_	Surface	Soil Cracks (B6)
Surface Water (A	A1)		A	quatic Faur	na (B13)	_	Sparsel	y Vegetated C	Concave Surface (B8)
High Water Tabl	e (A2)		M	larl Deposi	its (B15) (LRR U)		Drainag	e Patterns (B	10)
Saturation (A3)			н	ydrogen Su	ulfide Odor (C1)		Moss Tr	im Lines (B16	5)
Water Marks (B	1)		0	xidized Rhi	izospheres on Livi	ina <u> </u>	Dry-Sea	son Water Ta	able (C2)
Sediment Depos	sits (B2)			oots (C3)	•	_	Crayfish	Burrows (C8)
Drift Deposits (B	3)		P	resence of	Reduced Iron (C4	<u> </u>	Saturati	on Visible on	Aerial Imagery (C9)
Algal Mat or Cru	st (B4)		R	ecent Iron	Reduction in Tilled	<u>, </u>	X Geomor	phic Position	(D2)
Iron Deposits (B	5)			oils (C6)		<u> </u>	Shallow	Aquitard (D3)
Inundation Visib	le on Aerial Imaç	gery (B7)	T	hin Muck S	urface (C7)		X FAC-Ne	utral Test (D5	5)
Water-Stained L	eaves (B9)		0	ther (Expla	in in Remarks)	_	Sphagn	um moss (D8) (LRR T, U)
Field Observations	s:						<u></u>		
Surface water prese			No :	X Depth	(inches)		Wetla	nd hydrolog	v present?
Water table present				X Depth	· · · · · · · · · · · · · · · · · · ·			,	, , , , , , , , , , , , , , , , , , , ,
Saturation present?				X Depth			Yes 2	X N	0
(includes capillary f			_		(
Describe recorded		uge. monito	rina wel	I. aerial ph	otos, previous in	spections). i	if available	:	
	, ,	0 /	J		71	, ,			
Remarks:									
		Disturbed	soil:	skid tra	il and/or log	ging acc	ess pat	h.	
					J		-		
I									

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 4 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) Percent of Dominant Species 80.00% (A/B) that are OBL, FACW, or FAC: **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **44** x 1 = 20% of total cover: **FACW** species 50% of total cover: x 2 =Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species **14** x 3 = 42 FACU species 20 80 1 Ilex opaca **FAC** x 4 = **FACW** Quercus phellos UPL species 0 x 5 = 0 Liquidambar styraciflua 1 Ν **FAC** Column totals **105** (A) **220** (B) Quercus texana 1 Ν **FACW** Prevalence Index = B/A = 2.10 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation X 2 - Dominance test is >50% X 3 - Prevalence index is ≤3.0* = Total Cover 4 - Morphogical adaptations* (provide 50% of total cover: 20% of total cover: 1.6 supporting data in Remarks or on a (Plot size: Herb Stratum separate sheet) Problematic hydrophytic vegetation* 1 Glyceria striata OBL (explain) **FACU** Callicarpa americana 20 Boehmeria cylindrica 15 3 Ν **FACW** *Indicators of hydric soil and wetland hydrology must be Coleataenia rigidula 10 **FACW** 4 N present, unless disturbed or problematic 7 5 Gratiola neglecta OBL **Definitions of Four Vegetation Strata:** Ludwigia alternifolia **OBL** Ν Tree – Woody plants, excluding vines, 3 in. (7.6 cm) Acalypha gracilens **FAC** or more in diameter at breast height (DBH), regardless of height. 9 Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall = Total Cover Herb - All herbaceous (non-woody) plants, 91 regardless of size, and woody plants less than 3.28 50% of total cover: 45.5 20% of total cover: **18.2** (Plot size: 15-m radius) Woody Vine Stratum Smilax rotundifolia **FAC** Woody Vine – All woody vines greater than 3.28 ft Vitis rotundifolia **FAC** 3 4 5 Hydrophytic 6 = Total Cover vegetation Yes X No 20% of total cover: 1.2 present? 50% of total cover: Remarks: (Include photo numbers here or on a separate sheet)

Profile Des	cription: (Describe	to the dept	h needed to docum	nent the in	dicator o	r confir	m the al	bsence of in	dicators.)	
Depth	Matrix		Red	ox Feature	s					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Т	exture	Remarks	
0 - 1	10YR 3/3	100						loam		
1 - 4	10YR 5/4	98	10YR 5/8	2	С	М	silty	clay loam	Fe/Mn concretions	
4 - 12	10YR 6/2	39	10YR 5/6	2	С	М	silty	clay loam	Fe/Mn concretions	
	10YR 5/3	59								
¹ Type: C = 0	│ Concentration, D = □	enletion RM	I = Reduced Matrix	MS = Mas	ked Sand	Grains	² l o	cation: PL = I	Pore Lining, M = Matrix	
	Indicators:	opiodon, rav							matic Hydric Soils ³ :	
Histisol			Polyvalue Belov (LRR S, T, U)	v Surface (S8)			Muck (A10)	•	
	pipedon (A2)	-	Thin Dark Surfa	ce (S9) (I I	RST		_	Muck (A10)		
_	istic (A3)	-	Loamy Mucky N			_				
	en Sulfide (A4)	-	Loamy Gleyed I		(Little o)	'		iced Vertic (F side MLRA 1		
	d Layers (A5)	-	X Depleted Matrix	` '		_				
	: Bodies (A6) (LRR F	Р Т II)	Redox Dark Sur	` '				mont Flooapi ? P, S, T)	ain Soils (F19)	
	ucky Mineral (A7) (L	Depleted Dark S	, ,	')	_	Anomalous Bright Loamy Soils (F20)				
	resence (A8) (LRR l	Redox Depress	-	,			naious Brigni RA 153B)	Loamy Soils (F20)		
1 cm Mi	Marl (F10) (LRF	` '		_		Parent Mater	ial (TF12)			
	Depleted Ochrid	•	RA 151)	_	_		s Surface (TF12)			
	d Below Dark Surfac ark Surface (A12)				_	_		r (explain in i	·	
			Iron-Manganese X (LRR O, P, T)	e Masses (F12)	_		r (oxpidiir iir i	omanoj	
(MLRA	Prairie Redox (A16)	-	Umbric Surface	(F13) (I RI	RPTII	١				
 `	,	-	Delta Ochric (F			,				
(LRR O	Mucky Mineral (S1)	-	Reduced Vertic		-	150F		•	ophytic vegetation	
	Gleyed Matrix (S4)	-		and weltand hydrology must be Floodplain Soils (F19) (MLRA 149A) present, unless disturbed or						
	Redox (S5)	-		s Bright Loamy Soils (F20) present, unless disturbed or problematic						
	d Matrix (S6)		(MLRA 149A, 1))	ргові	Ciriatio		
	urface (S7) (LRR P, \$	S T II)	(III_IOA 140A, 1	000, 1002	,					
	Layer (if observed)):								
Depth (inch	es):			Hydric so	il presen	t?	Yes_	<u> </u>	No	
masses	•	r 40% of ı	matrix with chr	oma 2 c	r less.	It may	not b	e entirely	ick has Fe/Mn within 12" of the tom of the layer.	

Project/Site	Moro Creek Miti	igation Bank	Cit	y/County:	Bunn	S	ampling Da	te: 20	18/09/10	
Applicant/Owner:		_					ampling Poi		Plot 5	
Investigator(s):		wing, Joe Le			Section, Township, Range: T8S R14W S24					
Landform (hillslope	, terrace, etc.):	r	none	Local re	lief (concave, c	onvex, r	none):	noi	ne	
Slope (%): 0	Lat:			Long:		D	atum:	WGS	384	
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Clas	sification	า:	PFO1	4	
Are climatic/hydrolo	gic conditions of	the site typical	for this time	of the year? Ye	es X No_		(If no, ex	plain in rem	arks)	
Are vegetation	, soil	, or hydrol	ogysi	ignificantly distu	rbed? Aı	re "norm	al circumst	ances" pres	ent?	
Are vegetation	, soil	, or hydrol	ogyna	aturally problem	atic?	Ye	es X	No		
					(If	fneeded	l, explain ar	ny answers i	in Remarks.)	
SUMMARY OF FI		h site map sl	nowing san	npling point lo	cations, trans	sects, ii	mportant f	eatures, et	ic.	
Hydrophytic vegeta	-	Yes X	No	4						
Hydric soil present?		Yes X	No	Is the samp						
Wetland hydrology	present?	Yes X	No	within a we	tland?	Yes_	X	No		
HYDROLOGY										
Wetland Hydrolog	_				Sec	-	•		two required)	
Primary Indicators (minimum of one i	s required; che	eck all that a	ipply)			ce Soil Cracl			
Surface Water (•	_	Aquatic Fa		_			ed Concave S	Surface (B8)	
High Water Tabl	e (A2)	_		osits (B15) (LRR	_	_	age Patterns			
Saturation (A3)		_	Hydrogen \$	Sulfide Odor (C1		Moss	Trim Lines (B16)		
Water Marks (B			Oxidized R	Rhizospheres on	Living	_		r Table (C2)		
Sediment Depos		_	Roots (C3)				sh Burrows			
Drift Deposits (B	-	_	Presence o	of Reduced Iron		_		on Aerial Im	agery (C9)	
Algal Mat or Cru				n Reduction in T	illed		orphic Posit			
Iron Deposits (B	•	(D=)	Soils (C6)				w Aquitard			
	le on Aerial Image	ry (B7)		Surface (C7)		_	Neutral Test	` '		
Water-Stained L	eaves (B9)	_	Other (Exp	olain in Remarks)		_ Spnag	num moss ((D8) (LRR T ,	, U)	
Field Observations	s:									
Surface water prese	ent? Yes	No	X Dept	h (inches)		Wetl	and hydro	logy preser	nt?	
Water table present	t? Yes	No	X Dept	h (inches)						
Saturation present?	Yes _	No.	X Dept	h (inches)	_	Yes _	X	No	<u>—</u>	
(includes capillary f										
Describe recorded	usg mearts) atak	je, monitoring	well, aerial p	ohotos, previous	s inspections), if	f availab	le:			
Remarks:										

Sampling Point:

Plot 5

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the inc	dicator o	r confi	irm the absence of indi	cators.)			
Depth	Matrix		Redo	ox Features	3						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 3.5	10YR 3/2	100					silt loam				
3.5 - 12	10YR 6/2	49	10YR 5/8	2	С	М	silty clay loam				
	10YR 5/3	49					, ,				
		-									
¹ Type: C = (Concentration, D = D	enletion RM	= Reduced Matrix	MS = Mack	ed Sand	Grains	² l ocation: Pl = Po	ore Lining, M = Matrix			
	Indicators:	repletion, raivi				Orania	Indicators for Problem				
Histisol			Polyvalue Below (LRR S, T, U)	/ Surface (S	58)		1 cm Muck (A10) (L	•			
	pipedon (A2)	=	Thin Dark Surface	ce (SQ) (I B	реті	IV.	2 cm Muck (A10) (L	-			
	istic (A3)	-	Loamy Mucky M			-		-			
	en Sulfide (A4)	-	Loamy Gleyed N		(=::::0)		Reduced Vertic (F1 (outside MLRA 15)	•			
	d Layers (A5)	-	X Depleted Matrix				 `	•			
	: Bodies (A6) (LRR P	T II)	Redox Dark Sur	` '			Piedmont Floodplai (LRR P, S, T)	1 Solls (F19)			
	ucky Mineral (A7) (L l	· · · · · -	Depleted Dark S		١		Anomalous Bright Loamy Soils (F20)				
	resence (A8) (LRR L	Redox Depressi	-	,		(MLRA 153B)	oarny Solis (F20)				
	uck (A9) (LRR P. T)	·	Marl (F10) (LRR	` '			Red Parent Materia	I (TF12)			
	d Below Dark Surfac	e (A11)	Depleted Ochric	•	RA 151)		Very Shallow Dark	· ·			
	ark Surface (A12)	_	' Iron-Manganese		-		Other (explain in re	• •			
	rairie Redox (A16)		(LRR O, P, T)	iviasses (i	12)		 ` '	,			
(MLRA		-	Umbric Surface	(F13) (LRF	P, T, U))					
	, Mucky Mineral (S1)	-	 Delta Ochric (F1				_				
(LRR O		-	Reduced Vertic		-	150E	³ Indicators of hydro				
Sandy (Gleyed Matrix (S4)	-	— Piedmont Flood				and weltand hydrological and weltand hydrological (19 A) present, unless dist				
	Redox (S5)	=	— Anomalous Brig				problematic				
Stripped	d Matrix (S6)		(MLRA 149A, 1	-	•	,	•				
Dark Su	ırface (S7) (LRR P, S	s, T, U)									
D t. i . ti	1 ('C - l 1)		Т								
	Layer (if observed)	:									
Type: Depth (inch	oe).			Hydric soi	l procon	12	Yes X	No			
Deptil (illoli				riyuric sor	presen			NO			
Remarks:											

Project/Site	Moro Creek Mitig	ation Bank	City/	County:	Bunn/Cleve	eland	Sampling D	Pate: 2018/09/10		
Applicant/Owner:	Arkansas Dep	artment of T	ransportatio	n State:	AR		Sampling Po	oint: Plot 6		
Investigator(s):	Kayti Ew	ving, Joe Led	lvina	Sect	Section, Township, Range: T8S R14W S24					
Landform (hillslope	, terrace, etc.):	n	one	Local	relief (concav	/e, convex,	none):	none		
Slope (%): 0	Lat:			Long:		ا	Datum:	WGS84		
Soil Map Unit Name	e	Wehadkee	silt loam		NWI	Classification	on:	PFO1A		
Are climatic/hydrolo	ogic conditions of th	e site typical	for this time of	of the year? \	/es <u>X</u> N	0	(If no, e	explain in remarks)		
Are vegetation	, soil	, or hydrolo	ogysig	nificantly dis	turbed?	Are "nor	mal circums	stances" present?		
Are vegetation	, soil	, or hydrolo	ogynat	urally proble	matic?		'es <u>X</u>			
						-	-	any answers in Remarks.)		
SUMMARY OF FI		site map sh	owing sam	pling point	locations, t	ransects,	important	features, etc.		
Hydrophytic vegeta	· ·	Yes X	No							
Hydric soil present?		Yes X	No	Is the sam	-					
Wetland hydrology	present?	Yes X	No	within a w	etland?	Yes_	Х	No		
Remarks: (Explain	alternative procedu	res here or in	ı a separate r	eport.)						
HYDROLOGY										
Wetland Hydrolog	y Indicators:					Secondary	Indicators	(minimum of two required)		
Primary Indicators	(minimum of one is	required; che	ck all that ap	ply)			ace Soil Cra	• • •		
Surface Water (A1)		Aquatic Fau	na (B13)				ited Concave Surface (B8)		
High Water Tab	•		_	its (B15) (LR	R U)		nage Pattern			
Saturation (A3)			_	ulfide Odor (C			s Trim Lines			
Water Marks (B	1)		_		•			ter Table (C2)		
Sediment Depos	•		Roots (C3)	izospheres o	n Living		fish Burrows			
Drift Deposits (E			_	Reduced Iron	n (C4)			e on Aerial Imagery (C9)		
Algal Mat or Cru	-		_				morphic Pos			
Iron Deposits (B	` '		Soils (C6)	Reduction in	Tilled		low Aquitard			
	ole on Aerial Imagery	(B7)	Thin Muck S	Surface (C7)			· -Neutral Tes			
Water-Stained L			_	ain in Remark	s)			s (D8) (LRR T, U)		
Eigld Observation					<u>′</u>					
Field Observation Surface water pres		No	X Depth	(inches)		\Ma	tland bydr	ology procent?		
Water table presen		No	X Depth	· · · · · · · · · · · · · · · · · · ·		we	tianu nyun	ology present?		
Saturation present?		No	X Depth			Yes	X	No		
(includes capillary f			Deptil	(11101103)		163		<u> </u>		
Describe recorded			well aerial nh	notos previo	us inspection	e) if availa	hle:			
Describe recorded	data (Stream gauge	,, mornioring	well, aeriai pi	iotos, previo	as mapeonon	is), ii avalla	DIC.			
Remarks:										
rtomanto.										

VEGETATION Use scientific names of plants.	
---	--

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	Number of Dominant Species
1		•		that are OBL, FACW, or FAC: 1 (A)
1				that are OBL, I ACW, OF I AC (A)
2				Total Number of Dominant
3				Species Across all Strata: 1 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 100.00% (A/B)
6				(` ',
7				Prevalence Index Worksheet
8				Total % Cover of:
	:	= Total Cove	er	OBL species <u>2</u> x 1 = <u>2</u>
50% of total cover:	20% (of total cover	r:	FACW species 98 x 2 = 196
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 10 x 3 = 30
1 Gleditsia triacanthos	´ 1	N	FAC	FACU species 0 x 4 = 0
2 Quercus nigra	1	N	FAC	UPL species x 5 =0
3				Column totals <u>110</u> (A) <u>228</u> (B)
4				Prevalence Index = B/A = 2.07
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				X 3 - Prevalence index is ≤3.0*
		= Total Cove	-	4 - Morphogical adaptations* (provide
	1 20% d	of total cove	r: 0.4	supporting data in Remarks or on a
Herb Stratum (Plot size: 1m ²)			separate sheet)
1 Coleataenia rigidula	95	Υ	FACW	Problematic hydrophytic vegetation*
2 Scoparia dulcis	3			(explain)
	2		EA CIA/	 ` ' '
3 Pluchea camphorata			FACW	*Indicators of hydric soil and wetland hydrology must be
4 Diospyros virginiana	2	<u>N</u>	FAC	present, unless disturbed or problematic
5 Persicaria hydropiperoides	1	N	OBL	Definitions of Four Vegetation Strata:
6 Boehmeria cylindrica	1	N	FACW	
7 Heliotropium indicum	1	N	FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8 Acalypha gracilens	1	N	FAC	or more in diameter at breast height (DBH),
9 Eupatorium serotinum	1	N	FAC	regardless of height.
•				Sapling/Shrub – Woody plants, excluding
10 Gratiola neglecta	1	N	OBL	vines, less than 3 in. DBH and greater than or
11				equal to 3.28 ft (1 m) tall
12				equal to 3.26 it (1 iii) tali
	108	= Total Cove	er	Herb – All herbaceous (non-woody) plants,
50% of total cover:	20% c	of total cover	r: 21.6	regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius	1			ft tall
1 Vitis cinerea	, 1	N	FAC	Woody Vine – All woody vines greater than 3.28 ft
1		N		1
2 Toxicodendron radicans	1	<u>N</u>	FAC	in height.
3 Smilax rotundifolia	1	N	FAC	
4 Passiflora incarnata	1	N		
5				
6				Thurston who still
	4	= Total Cove		Hydrophytic
500/ 51.1.				vegetation
50% of total cover:	2 20% c	of total cover	r: 0.8	present? Yes X No
Remarks: (Include photo numbers here or on a sepa	rate sheet)			
· · ·	•			

Sampling Point:

Plot 6

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the inc	dicator o	r confi	irm the absence of indi	cators.)		
Depth	Matrix		Redo	ox Features	3					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 5	10YR 3/2	98	7.5YR 4/6	2	С	М	silt loam			
5 - 10	7.5YR 3/2	88	7.5YR 5/6	2	С	М	silty clay loam			
	7.5YR 5/2	5								
¹ Type: C = 0	Concentration, D = D	enletion RM	= Reduced Matrix I	│ MS = Mask	ed Sand	Grains	² l ocation: PL = Pc	ore Lining, M = Matrix		
	Indicators:	repletion, ravi				Oranic	Indicators for Problem			
Histisol			Polyvalue Below (LRR S, T, U)	/ Surrace (s	58)		1 cm Muck (A10) (L	•		
	pipedon (A2)	-	Thin Dark Surface	ce (S9) (LR	R S, T, U	J)	2 cm Muck (A10) (L	-		
	istic (A3)	-	 Loamy Mucky M			-	Reduced Vertic (F1	•		
— Hydroge	en Sulfide (A4)	-	Loamy Gleyed N	Лatrix (F2)			(outside MLRA 150	•		
Stratifie	d Layers (A5)	-	X Depleted Matrix	(F3)			Piedmont Floodplai	n Soils (F19)		
Organio	Bodies (A6) (LRR P	P, T, U)	Redox Dark Sur	face (F6)			(LRR P, S, T)			
5 cm Mi	ucky Mineral (A7) (L l	RR P, T, U)	Depleted Dark S	Surface (F7)		Anomalous Bright Loamy Soils (F20)			
Muck P	resence (A8) (LRR L	J) _	Redox Depressi	` '			(MLRA 153B)			
	uck (A9) (LRR P. T)	_	Marl (F10) (LRR	•			Red Parent Materia	· ·		
	d Below Dark Surfac	ce (A11)	Depleted Ochric	(F11) (ML	RA 151)		Very Shallow Dark	• •		
	ark Surface (A12) Prairie Redox (A16)	_	Iron-Manganese (LRR O, P, T)	e Masses (F	12)		Other (explain in re	narks)		
(MLRA		_	Umbric Surface	(F13) (LRF	P, T, U))				
Sandy N	Mucky Mineral (S1)	_	Delta Ochric (F1	7) (MLRA	151)		31m diagtors of budge	nhydia ya gatatian		
LRR O	•	_	Reduced Vertic	(F18) (MLF	RA 150A,	150E	³ Indicators of hydrophytic vegetation and weltand hydrology must be			
	Gleyed Matrix (S4)	_	Piedmont Flood	plain Soils	(F19) (MI	_RA 14	9A) present, unless disturbed or problematic			
	Redox (S5)		Anomalous Brigl	•	•)				
	d Matrix (S6)		(MLRA 149A, 1	53C, 153D)						
Dark St	ırface (S7) (LRR P, \$	S, I, U)								
Restrictive	Layer (if observed)):								
Туре:										
Depth (inch	es):			Hydric soi	l presen	t?	Yes X	No		
Remarks:										
. tomaine										

Project/Site	Moro Creek Mitig	County:	Bunn/Cleve	eland	Sampling D	Date: 2018/09/10			
Applicant/Owner:	licant/Owner: Arkansas Department of Transportatio				AR		Sampling Po	oint: Plot 7	
Investigator(s):	Kayti Ev	ving, Joe Led	lvina	Section, Township, Range: T8S R14W S					
Landform (hillslope	, terrace, etc.):	n	one	Local	elief (concav	ve, convex,	none):	none	
Slope (%): 0	Lat:			Long:			Datum:	WGS84	
Soil Map Unit Name	e	Wehadkee	silt loam		NWI	Classification	on:	PFO1A	
Are climatic/hydrolo	ogic conditions of th	e site typical	for this time of	of the year? \	∕es <u>X</u> N	lo	(If no, e	explain in remarks)	
Are vegetation						Are "nor	mal circums	stances" present?	
Are vegetation	, soil	, or hydrolo	ogynat	urally proble	matic?		es X		
						-		any answers in Remarks	s.)
SUMMARY OF FI		site map sh	owing sam	pling point	locations, t	ransects,	important	features, etc.	
Hydrophytic vegeta	· ·	Yes X	No						
Hydric soil present?		Yes X	No	Is the sam	-				
Wetland hydrology	present?	Yes X	No	within a w	etland?	Yes_	Х	No	
Remarks: (Explain	alternative procedu	res here or in	a separate r	eport.)					
HYDROLOGY									
Wetland Hydrolog	y Indicators:					Secondary	/ Indicators	(minimum of two require	ed)
Primary Indicators	(minimum of one is	required; che	ck all that ap	ply)		-	ace Soil Cra	•	,
Surface Water (A1)		Aquatic Fau	na (B13)				ated Concave Surface (B8	3)
High Water Tab	•		_	its (B15) (LR	R U)		nage Patterr		,
Saturation (A3)	,		_	ulfide Odor (C	-		s Trim Lines		
Water Marks (B	1)		_					ter Table (C2)	
Sediment Depos	•		Oxidized Rhizospheres on Living Roots (C3)				fish Burrows		
Drift Deposits (E			_	Reduced Iron	n (C4)			e on Aerial Imagery (C9)	
Algal Mat or Cru	•		_				morphic Pos		
Iron Deposits (B	, ,		Soils (C6)	Reduction in	Tillea		low Aquitard		
	le on Aerial Imagery	(B7)	Thin Muck S	Surface (C7)			-Neutral Tes		
Water-Stained L	_eaves (B9)	<u> </u>	_	ain in Remark	s)	Spha	phagnum moss (D8) (LRR T, U)		
Field Observation			_						
Surface water pres		No	X Depth	(inches)		Wo	tland hydr	ology present?	
Water table presen	_	No	X Depth	· · · · · · · · · · · · · · · · · · ·		•••	ilana nyan	ology procent.	
Saturation present?		No	X Depth			Yes	X	No	
(includes capillary f	_			(1101100)		-			
Describe recorded		monitoring	well, aerial ph	notos previo	us inspection	ıs). if availa	ıble:		
	aata (etream gaagt	,,g	, aoa. p.	.отоо, р.от.ю.		,,			
Remarks:									

Sampling Point:

Plot 7

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the inc	dicator o	r conf	irm the absence of ind	icators.)		
Depth	Matrix		Redo	ox Features	3					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 4	7.5YR 3/2	98	10YR 3/6	2	С	M	silty clay loam			
4 - 10	10YR 4/2	98	10YR 3/6	2	С	M	silty clay loam			
¹ Type: C = 0	Concentration, D = D	epletion, RM	I = Reduced Matrix, I	MS = Mask	ed Sand	Grains	s. ² Location: PL = Po	ore Lining, M = Matrix		
Hydric Soil	Indicators:		Polyvalue Below	Surface (S	S8)		Indicators for Problem	natic Hydric Soils ³ :		
Histisol	(A1)	-	(LRR S, T, U)	,	,		1 cm Muck (A10) (L	.RR O)		
Histic E	pipedon (A2)	-	Thin Dark Surface			-	2 cm Muck (A10) (L	.RR S)		
	istic (A3)	-	Loamy Mucky M	` '	(LRR O)		Reduced Vertic (F1			
	en Sulfide (A4)	-	Loamy Gleyed M	, ,			(outside MLRA 15)A, B)		
	d Layers (A5)		X Depleted Matrix	` '			Piedmont Floodplai	n Soils (F19)		
	Bodies (A6) (LRR P	· · · · · · ·	Redox Dark Surf				(LRR P, S, T)			
	ucky Mineral (A7) (L l	-	Depleted Dark S)		Anomalous Bright Loamy Soils (F20) (MLRA 153B)			
	resence (A8) (LRR L uck (A9) (LRR P. T)	, (r	Redox Depression Marl (F10) (LRR	` '			Red Parent Materia	I /TE12)		
	d Below Dark Surfac	Δ (Δ11)	Depleted Ochric	•	RΔ 151)		Very Shallow Dark	·		
	ark Surface (A12)	· (A11)			-		Other (explain in re	• •		
Coast F	Prairie Redox (A16)	-	Iron-Manganese (LRR O, P, T)		·		Outer (explain in re	nano)		
(MLRA	150A)	-	Umbric Surface)				
_	Mucky Mineral (S1)	-	Delta Ochric (F1		-		³ Indicators of hydro	phytic vegetation		
(LRR O	•	-	Reduced Vertic				and weltand hydrology must be			
	Gleyed Matrix (S4)	-	Piedmont Flood				(9A) present, unless disturbed or problematic			
	Redox (S5) d Matrix (S6)		Anomalous Brigh (MLRA 149A, 1	•	•))				
	urface (S7) (LRR P, \$	S T II)	(WILIXA 149A, 13	33C, 133D)						
Restrictive	Layer (if observed)):								
Туре:										
Depth (inch	es):			Hydric soi	l presen	t?	Yes X	No		
Remarks:										

Project/Site	Moro Creek Mitig	County:	Bunn/Cleve	land S	Sampling Da	ate: 2018/09/11			
Applicant/Owner:	licant/Owner: Arkansas Department of Transportation				State: AR			oint: Plot 8	
Investigator(s):	Kayti Ev	ving, Joe Led	dvina	Section, Township, Range: T8S R14W S24					
Landform (hillslope	, terrace, etc.):	r	none	Local	relief (concav	e, convex, ı	none):	none	
Slope (%): 0	Lat:	40.000	01	Long:	-81.0000	1 D	atum:	WGS84	
Soil Map Unit Name	e	Wehadkee	silt loam		NWI C	Classificatio	n:	PFO1A	
Are climatic/hydrolo	ogic conditions of the	ne site typical	for this time of	of the year?	Yes X No		(If no, ex	xplain in remarks)	
Are vegetation						Are "norm	nal circums	tances" present?	
Are vegetation	, soil	, or hydrol	ogynat	urally proble	matic?		es X		
						-	-	ny answers in Remarks.)	
SUMMARY OF FI		site map sh	nowing sam	pling point	locations, tr	ansects, i	mportant	features, etc.	
Hydrophytic vegeta	-	Yes X	No						
Hydric soil present?		Yes X	No	Is the san	-				
Wetland hydrology	present?	Yes X	No	within a w	etland?	Yes_	X	No	
Remarks: (Explain	alternative procedu	ıres here or ir	n a separate r	eport.)					
HYDROLOGY									
Wetland Hydrolog	y Indicators:					Secondary	Indicators ((minimum of two required)	
Primary Indicators	(minimum of one is	required; che	eck all that ap	ply)		Surfa	ce Soil Crac	ks (B6)	
Surface Water (A1)	_	_Aquatic Fau	na (B13)		Spars	ely Vegetat	ed Concave Surface (B8)	
High Water Tab	le (A2)		Marl Depos	its (B15) (LF	RR U)	Draina	age Patterns	s (B10)	
Saturation (A3)			Hydrogen S	ulfide Odor (0	C1)	Moss	Trim Lines	(B16)	
Water Marks (B	1)		Oxidized Rh	izospheres o	n Livina	Dry-S	eason Wate	er Table (C2)	
Sediment Depos	sits (B2)		Roots (C3)			Crayfi	ish Burrows	(C8)	
Drift Deposits (E	33)		Presence of	Reduced Iro	n (C4)	Satura	ation Visible	e on Aerial Imagery (C9)	
Algal Mat or Cru	ıst (B4)		Recent Iron	Reduction in	Tilled	X Geom	norphic Posi	tion (D2)	
Iron Deposits (B	5)		Soils (C6)			Shallo	ow Aquitard	(D3)	
Inundation Visib	le on Aerial Imagery	/ (B7)	Thin Muck S	Surface (C7)		X FAC-I	Neutral Test	i (D5)	
Water-Stained L	.eaves (B9)	_	Other (Expla	ain in Remark	s)	Spha	gnum moss	(D8) (LRR T, U)	
Field Observation	e.		_						
Surface water pres		No	X Depth	(inches)		Wet	land hydro	ology present?	
Water table presen	_	No	X Depth	· · · · · · · · · · · · · · · · · · ·				negy process.	
Saturation present?	_	No	X Depth	· ·		Yes	X	No	
(includes capillary f	_			(11101100)		_			
Describe recorded		e monitorina	well, aerial ph	notos previo	us inspections	s), if availab	ole:		
	aata (sa sa gaag	z,eg	, aa. p.	.о.оо, р.от.о		-), a. a. a.			
Remarks:									

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 8 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species x 1 =20% of total cover: 50% of total cover: **FACW** species 17 x 2 =Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species x 3 = 78 FACU species 12 1 Ilex opaca **FAC** x 4 =**FAC** 2 Pinus taeda UPL species 0 x 5 = 0 Nyssa sylvatica 1 Ν **FAC** Column totals **47** (A) **125** (B) Quercus texana 1 Ν **FACW** Prevalence Index = B/A = 2.66 FACW **Hydrophytic Vegetation Indicators:** Betula nigra 1 - Rapid test for hydrophytic vegetation X 2 - Dominance test is >50% X 3 - Prevalence index is ≤3.0* = Total Cover 4 - Morphogical adaptations* (provide 50% of total cover: 20% of total cover: 2.4 supporting data in Remarks or on a Herb Stratum (Plot size: separate sheet) Problematic hydrophytic vegetation* 1 Betula nigra **FACW** (explain) **FAC** Acalypha gracilens 3 Dichanthelium dichotomum 6 **FAC** *Indicators of hydric soil and wetland hydrology must be Boehmeria cylindrica 4 Ν **FACW** 4 present, unless disturbed or problematic 5 Pluchea camphorata **FACW Definitions of Four Vegetation Strata:** Solidago altissima 3 **FACU** Ν Scoparia dulcis 2 Ν Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), Dichanthelium commutatum 2 Ν FAC regardless of height. **OBL** Saururus cernuus 9 Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or 11 equal to 3.28 ft (1 m) tall = Total Cover Herb - All herbaceous (non-woody) plants, 35 regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: (Plot size: 15-m radius) Woody Vine Stratum Vitis cinerea Woody Vine – All woody vines greater than 3.28 ft **FAC**

FAC

2

= Total Cover

20% of total cover: **0.4**

Hydrophytic

vegetation

present?

Remarks: (Include photo numbers here or on a separate sheet)

50% of total cover:

Berchemia scandens

3 4 5

Yes X No

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the inc	dicator o	r conf	irm the absence of	indicators.)		
Depth	Matrix		Redo	ox Features	5					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 6	10YR 6/2	98	10YR 5/8	2	С	М	silty clay loam			
6 - 12	10YR 5/2	48	10YR 5/8	2	С	М	silty clay loam			
	10YR 6/2	48	10YR 3/6	2	С	М				
¹ Type: C = 0	Concentration. D = D	epletion. RM	I = Reduced Matrix, I	MS = Mask	ed Sand	Grains	s. ² Location: PL :	= Pore Lining, M = Matrix		
	Indicators:	<u> </u>				0.4		Diematic Hydric Soils ³ :		
Histisol			Polyvalue Below (LRR S, T, U)	Surface (S	50)		1 cm Muck (A10	•		
	pipedon (A2)	-	Thin Dark Surface	ce (S9) (LR	R S. T. I	J)	2 cm Muck (A10			
	istic (A3)	-	Loamy Mucky M							
	en Sulfide (A4)	-	Loamy Gleyed N		(Little o)		Reduced Vertic (outside MLRA	• •		
	d Layers (A5)	-	X Depleted Matrix					• •		
	: Bodies (A6) (LRR P	T II)	Redox Dark Sur	. ,			(LRR P, S, T)	lplain Soils (F19)		
	ucky Mineral (A7) (L l	-	Depleted Dark S	` '	`					
	resence (A8) (LRR L		Redox Depressi	,)		_	Anomalous Bright Loamy Soils (F20) (MLRA 153B)		
	uck (A9) (LRR P. T)	·')	Marl (F10) (LRR	` '				Red Parent Material (TF12)		
	d Below Dark Surfac	- 	Depleted Ochric	•	DA 151\			ark Surface (TF12)		
		e (ATT)			-			· · ·		
	ark Surface (A12)		Iron-Manganese	: Masses (F	F12)		Other (explain in	n remarks)		
	Prairie Redox (A16)	-	(LRR O, P, T)	(E40) (I. D. E	. D. T. III					
(MLRA	-	-	Umbric Surface		-					
-	Mucky Mineral (S1)	-	Delta Ochric (F1			³ Indicators of hy	drophytic vegetation			
(LRR O	•	-	Reduced Vertic				and weltand hyd	drology must be		
	Gleyed Matrix (S4)	-	Piedmont Flood		. , .		present, unicss	disturbed or		
	Redox (S5)		Anomalous Brigi	•	•))	problematic			
	d Matrix (S6)		(MLRA 149A, 1	53C, 153D))					
Dark St	ırface (S7) (LRR P, S	S, T, U)								
Restrictive	Layer (if observed)	:								
Type:	.,									
	es):			Hydric soi	l presen	t?	Yes X	No		
	,									
Remarks:										

Project/Site	Moro Creek N	Mitigation Ba	nk	City/County	/: E	Bunn	Sam	pling Date:	2018/09/11	
Applicant/Owner:	Arkansas	Department	of Trans	oortation S		AR	Sam	pling Point:	plot 9	
Investigator(s): Kayti Ewing, Joe Ledvina					Section, Township, Range: T8S R14W S24					
Landform (hillslope	, terrace, etc.):		none		_ocal relief (c	oncave, conv	ex, non	e):	none	
Slope (%): 0	Lat:			Long	g:		Datu	m:	WGS84	
Soil Map Unit Name	e	Wehad	kee silt l	oam		NWI Classific	cation:		PFO1A	
Are climatic/hydrolo	gic conditions	of the site typ	ical for th	is time of the y	ear? Yes	X No	(If no, expla	ain in remarks)	
Are vegetation					=		normal (circumstan	ces" present?	
Are vegetation	, soil	, or hyd	drology	naturally p	oroblematic?		Yes	X	No	
						•			answers in Remarks.)	
SUMMARY OF FI		-			ooint location	ons, transec	ts, imp	ortant fea	itures, etc.	
Hydrophytic vegeta	-		X No							
Hydric soil present?			X No	13 111	e sampled a					
Wetland hydrology	present?	Yes	X No	with	in a wetland	? Yo	es	<u> </u>	No	
Remarks: (Explain										
HYDROLOGY										
Wetland Hydrolog	_					Second	dary Ind	icators (mi	nimum of two required)	
Primary Indicators (minimum of or	ie is required;	check all	that apply)				Soil Cracks	,	
Surface Water (,			atic Fauna (B13	•				Concave Surface (B8)	
High Water Tabl	e (A2)			l Deposits (B1			_	Patterns (E	·	
Saturation (A3)			Hyd	rogen Sulfide C	dor (C1)	N	loss Trir	m Lines (B1	6)	
Water Marks (B	•		Oxio	dized Rhizosphe	eres on Living		-	on Water T		
Sediment Depos				ts (C3)			-	Burrows (C	·	
Drift Deposits (B	•		Pres	sence of Reduc	ed Iron (C4)				Aerial Imagery (C9)	
Algal Mat or Cru				ent Iron Reduct	ion in Tilled			hic Position	, ,	
Iron Deposits (B	•			s (C6)	(07)			Aquitard (D3		
Inundation Visib		gery (B7)		Muck Surface	,			tral Test (D	,	
Water-Stained L	.eaves (B9)		Othe	er (Explain in R	emarks)	<u> </u>	pnagnu	m moss (D	B) (LRR T, U)	
Field Observations	s:									
Surface water prese	ent? Yes			Depth (inches			Wetlan	d hydrolog	gy present?	
Water table present				Depth (inches						
Saturation present?		· !	No <u>X</u>	_Depth (inches	s)	Yes	s <u>X</u>		No	
(includes capillary f	<u> </u>									
Describe recorded	data (stream g	auge, monitor	ing well, a	aerial photos, p	revious insp	ections), if av	ailable:			
Remarks:										

VEGETATION -- Use scientific names of plants. Sampling Point: plot 9 **Dominance Test Worksheet** Absolute Dominant Indicator Tree Stratum (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B) **Prevalence Index Worksheet** Total % Cover of: **18** x 1 = = Total Cover OBL species 20% of total cover: 50% of total cover: **FACW** species **90** x 2 = 180 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species 1 x 3 = FACU species x 4 = UPL species **0** x 5 = 0 Column totals **110** (A) **205** (B) Prevalence Index = B/A = 1.86 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation X 2 - Dominance test is >50% X 3 - Prevalence index is ≤3.0* = Total Cover 4 - Morphogical adaptations* (provide 50% of total cover: 20% of total cover: supporting data in Remarks or on a (Plot size: 1m² Herb Stratum separate sheet) Problematic hydrophytic vegetation* 1 Coleataenia rigidula **FACW** (explain) Rhynchospora corniculata 15 OBL 3 3 Gratiola neglecta Ν **OBL** *Indicators of hydric soil and wetland hydrology must be Quercus phellos **FACW** 4 present, unless disturbed or problematic 5 Pluchea camphorata Ν **FACW Definitions of Four Vegetation Strata:** Boehmeria cylindrica Ν **FACW** Tree – Woody plants, excluding vines, 3 in. (7.6 cm) Cyperus cf. odoratus 1 Ν or more in diameter at breast height (DBH), Andropogon virginicus **FAC** regardless of height. Callicarpa americana **FACU** Cyperus pseudovegetus Sapling/Shrub - Woody plants, excluding 1 Ν **FACW** 10 vines, less than 3 in. DBH and greater than or 11 Eupatorium capillifolium **FACU** equal to 3.28 ft (1 m) tall 12 111 = Total Cover Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: **22.2** Woody Vine Stratum (Plot size: 15-m radius) Woody Vine – All woody vines greater than 3.28 ft 5 Hydrophytic = Total Cover vegetation Yes X No 20% of total cover: present? 50% of total cover: Remarks: (Include photo numbers here or on a separate sheet) Percent cover was not estimated for Eupatorium capillifolium. Percent cover by this species was always much less than 10%, so would not change the results of either the dominance or prevalence tests.

Profile Des	cription: (Describe	to the dept	h needed to docun	nent the in	dicator o	r confi	rm the absence of i	indicators.)		
Depth	Matrix		Red	es						
(Inches)	Color (moist)	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 6	7.5YR 3/2	98	7.5YR 5/8	2	С	М	silty clay loam			
6 - 12	7.5YR 3/2	49	7.5YR 4/6	2	С	М	silty clay loam			
	7.5YR 6/2	49								
¹ Type: C = 0	└ Concentration, D = D	epletion RM	/ = Reduced Matrix	MS = Mas	⊥ ked Sand	Grains	² l ocation: PL =	Pore Lining, M = Matrix		
• •	Indicators:	opiodori, rai						lematic Hydric Soils ³ :		
Histisol			Polyvalue Belov (LRR S, T, U)	v Surrace (58)		1 cm Muck (A10	-		
	pipedon (A2)		Thin Dark Surfa	ice (S9) (I I	RRSTI	I) .	2 cm Muck (A10			
_	listic (A3)	•	Loamy Mucky N							
	en Sulfide (A4)	·	Loamy Gleyed I	-			Reduced Vertic (outside MLRA	,		
	ed Layers (A5)		X Depleted Matrix				`	• •		
	c Bodies (A6) (LRR F	T 11\	Redox Dark Sui	` '			Piedmont Flood (LRR P, S, T)	plain Soils (F19)		
	ucky Mineral (A7) (L	-		, ,	7 \		 ·			
		· · · · · · · · · · · · · · · · · · ·		,	()		_	Anomalous Bright Loamy Soils (F20)		
	resence (A8) (LRR L	(י	Redox Depress	` '		•		(MLRA 153B) 		
	uck (A9) (LRR P. T)	(Δ11)	Marl (F10) (LRF	•	DA 454\	•		,		
	ed Below Dark Surfac	e (ATT)	Depleted Ochrid					ark Surface (TF12)		
I NICK D	ark Surface (A12)		Iron-Manganese	e Masses (F12)		Other (explain ir	remarks)		
	Prairie Redox (A16)		(LRR O, P, T)	(E40) (I B						
(MLRA	150A)	,	Umbric Surface		-					
_	Mucky Mineral (S1)	,	Delta Ochric (F		-		³ Indicators of hv	drophytic vegetation		
(LRR O	•	•	Reduced Vertic				and weltand hvo			
	Gleyed Matrix (S4)	•	Piedmont Flood	lplain Soils	(F19) (M I	LRA 14	procent, amous distarbod of			
	Redox (S5)		Anomalous Brig	, ,	`))	problematic			
	d Matrix (S6)		(MLRA 149A, 1	53C, 153D))					
Dark Su	urface (S7) (LRR P, S	S, T, U)								
Restrictive	Layer (if observed)	\ <u>.</u>								
Type:	Luyer (ii observed)	, <u>-</u>								
-	es):			Hydric so	il presen	t?	Yes X	No		
2 op (o				,	p. 000	••				
Remarks:										
1										

Project/Site	Moro Creek M	Mitigation Ba	ınk	City/	County:	Bunn	Sa	ampling Date	2018/09/11
Applicant/Owner:	Arkansas	Department	of Tran	 sportatio	on State:	AR	Sa	mpling Point	plot 10
Investigator(s):	Investigator(s): Kayti Ewing, Joe Ledvina				Section,	Township, F	Range:	T89	S R14W S24
Landform (hillslope	, terrace, etc.):		none)	Local relie	ef (concave,	convex, n	one):	none
Slope (%): 0	Lat:				Long:		Da	atum:	WGS84
Soil Map Unit Name	e	Wehad	dkee silt	loam		_ NWI Clas	ssification	: <u></u>	PFO1A
Are climatic/hydrolo	ogic conditions	of the site typ	oical for t	his time c	of the year? Yes	X No		(If no, expla	ain in remarks)
Are vegetation	, soil	, or hy	drology_	sig	nificantly disturb	ed? A	Are "norma	al circumstan	ces" present?
Are vegetation	, soil	, or hy	drology_	nat	urally problema	tic?	Ye	sX	No
						(If needed	, explain any	answers in Remarks.)
SUMMARY OF FI	NDINGS - Att	ach site ma	p showi	ing sam	pling point loc	ations, tran	nsects, in	nportant fea	atures, etc.
Hydrophytic vegeta	tion present?	Yes	X	اه <u> </u>					
Hydric soil present	?	Yes	<u>X</u> N	اه <u> </u>	Is the sample	ed area			
Wetland hydrology	present?	Yes	<u>X</u> N	No	within a wetla	and?	Yes	Х	No
Remarks: (Explain	alternative pro	cedures here	or in a s	eparate r	eport.)				
HYDROLOGY									
Wetland Hydrolog	y Indicators:					Se	condary li	ndicators (mi	nimum of two required)
Primary Indicators	(minimum of or	ne is required	; check a	all that ap	ply)	_	Surfac	e Soil Cracks	(B6)
Surface Water (A1)		Aq	uatic Fau	na (B13)	_	Sparse	ly Vegetated	Concave Surface (B8)
High Water Tab	le (A2)		— Ma	arl Depos	its (B15) (LRR U	J)		ge Patterns (E	
Saturation (A3)	,			-	ulfide Odor (C1)	· –		rim Lines (Β1	·
Water Marks (B	1)			_		- uina		ason Water T	•
Sediment Depos	,			aaizea Kn oots (C3)	izospheres on Li	ving _		sh Burrows (C	
Drift Deposits (E				` '	Reduced Iron (C	- (4)		-	Aerial Imagery (C9)
Algal Mat or Cru	•				•	_		orphic Position	
Iron Deposits (B				ecent Iron oils (C6)	Reduction in Tille	ed <u> </u>		w Aquitard (D:	, ,
Inundation Visib	•	agery (B7)		` '	Surface (C7)	_		eutral Test (D	
Water-Stained L		igory (Dr)			ain in Remarks)	_		`	B) (LRR T, U)
	. ,			ilei (Expia	ani in Remarks)				5) (L 1, 5)
Field Observation				_					
Surface water pres				Depth		_	Wetla	and hydrolo	gy present?
Water table presen				C Depth		_			
Saturation present?		š <u> </u>	No X	(Depth	(inches)	_	Yes	<u>X</u> 1	No
(includes capillary f	<u> </u>								
Describe recorded	data (stream g	auge, monito	ring well,	, aerial ph	notos, previous i	nspections),	if availabl	e:	
Remarks:									

VEGETATION -- Use scientific names of plants.

/EGETATION Use scientific names of plan	ıts.			Sampling Point:plot 10
	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (Plot size: 30-m radius)	% Cover	Species	Staus	Number of Dominant Species
1				that are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across all Strata: (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 100.00% (A/B)
6				
7				Prevalence Index Worksheet
8				Total % Cover of:
E00/		= Total Cove		OBL species 45 x 1 = 45
50% of total cover:	20% c	of total cover	<u> </u>	FACW species 41 x 2 = 82
Sapling/Shrub Stratun (Plot size: 15-m radius	_			FAC species 12 x 3 = 36
1 Liquidambar styraciflua	7	<u> </u>	FAC	FACU species 9 x 4 = 36
2				UPL species $0 \times 5 = 0$
3				Column totals 107 (A) 199 (B)
4				Prevalence Index = B/A = 1.86
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8		- : : :		X 3 - Prevalence index is ≤3.0*
500/ of total cover: 2		= Total Cover		4 - Morphogical adaptations* (provide
	20% c	of total cover	1.4	supporting data in Remarks or on a
)	v	O DI	separate sheet) Problematic hydrophytic vegetation*
1 Glyceria striata	45	<u>Y</u>	OBL	(explain)
2 Coleataenia rigidula	<u>35</u>	Y	FACU	— (охрант)
3 Eupatorium capillifolium		N	FACW	*Indicators of hydric soil and wetland hydrology must be
4 Mikania scandens 5 Liquidambar styraciflua	<u> </u>	<u>N</u>	FACW FAC	present, unless disturbed or problematic
	2	N		Definitions of Four Vegetation Strata:
6 Callicarpa americana	1	N	FACU FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
7 Pluchea camphorata 8 Ulmus sp.	1	N	FACTV	or more in diameter at breast height (DBH),
8 Ulmus sp.				regardless of height.
9 10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12				equal to 3.28 ft (1 m) tall
12	99 :	= Total Cove		Herb – All herbaceous (non-woody) plants,
50% of total cover: 49		of total cover		regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius	1 20.00	71 10101 00.2.		ft tall
1 Smilax rotundifolia	2	N	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Rubus laudatus	1			in height.
3				
4				
5				
6				Ludronhutio
	3 :	= Total Cove	r	Hydrophytic vegetation
50% of total cover: 1 .		of total cover		present? Yes X No
				l' — —
Remarks: (Include photo numbers here or on a separ	rate sheet)			.1
tomano. (s.sss pross	ute 5 : .,			

Profile Des	cription: (Describe	to the dept	h needed to docun	nent the inc	dicator o	or conf	irm the absence of	indicators.)	
Depth	Matrix		Red	lox Features	6				
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0 - 4	10YR 3/2	88	10YR 3/6	2	С	М	silty clay loam		
	10YR 4/2	10							
4 - 12	10YR 4/2	88	10YR 4/6	2	С	М	loamy clay		
<u> </u>	10YR 5/3	10					icamy ciay		
	10111 0/0	10							
¹ Type: C = 0	│ Concentration, D = □	L Depletion, RM	/ / = Reduced Matrix,	MS = Mask	ed Sand	l Grains	ls. ² Location: PL :	 = Pore Lining, M = Matrix	
Hydric Soil	Indicators:		Polyvalue Belov	w Surface (9	38)		Indicators for Prob	olematic Hydric Soils ³ :	
Histisol			(LRR S, T, U)	W Surface (C	30)		1 cm Muck (A10	•	
	pipedon (A2)	•	Thin Dark Surfa	nce (S9) (LR	R S. T. I	U)	2 cm Muck (A10		
	listic (A3)	•	Loamy Mucky N			-			
	en Sulfide (A4)	·	Loamy Gleyed I		(,	'	Reduced Vertic (outside MLRA		
	d Layers (A5)		X Depleted Matrix				 `	. ,	
	Bodies (A6) (LRR F	P T II)	Redox Dark Sui	` '			(LRR P, S, T)	lplain Soils (F19)	
<u> </u>	ucky Mineral (A7) (L		Depleted Dark S	` ,	`			1.11 (500)	
	resence (A8) (LRR l		Redox Depress	•	,		Anomalous Bright Loamy Soils (F20) (MLRA 153B)		
	uck (A9) (LRR P. T)	-,	Marl (F10) (LRF	, ,			Red Parent Mat	terial (TF12)	
	ed Below Dark Surface	re (Δ11)	Depleted Ochrid		RA 151)			ark Surface (TF12)	
	ark Surface (A12))C (/111)					Other (explain i	, ,	
			Iron-Manganese (LRR O, P, T)	e Masses (F	-12)		Other (explain ii	irremarks)	
(MLRA	Prairie Redox (A16)	·	Umbric Surface	/E13\ /I DE	рвти	`			
	-	·	Delta Ochric (F			,			
Sandy I	Mucky Mineral (S1)		Reduced Vertic		drophytic vegetation				
	Gleyed Matrix (S4)	•	Piedmont Flood				and weltand hydrology must be 9A) present, unless disturbed or		
	Redox (S5)	·					present, unless problematic	disturbed or	
	d Matrix (S6)		Anomalous Brig (MLRA 149A, 1))	problematic		
	urface (S7) (LRR P, \$	S T II)	(WLNA 143A, 1	1330, 1330)	1				
Daik St	inace (37) (LKK F,	3, 1, 0)							
Restrictive	Layer (if observed)):							
Type:									
Depth (inch	es):			Hydric soi	l presen	t?	Yes X	No	
Remarks:									

Project/Site	Moro Creek M	itigation Ban	ık	City/County:	Bunn	Sa	mpling Date:	2018/09/11		
Applicant/Owner:	Arkansas	Department of	of Transpo	ortation State:	AR	Sa	mpling Point:	plot 11		
Investigator(s):	etion, Township, Range: T8S R14W S24									
Landform (hillslope	, terrace, etc.):		none	Local re	elief (concave	, convex, n	one):	none		
Slope (%): 0	Lat:			Long:		Da	ntum:	WGS84		
Soil Map Unit Name	e	Wehadl	kee silt lo	am	NWI CI	assification	: <u></u>	PFO1A		
Are climatic/hydrolo	ogic conditions o	of the site typi	cal for this	time of the year? You	es X No		(If no, expla	in in remarks)		
Are vegetation	, soil	, or hyd	rology	significantly distu	ırbed?	Are "norma	al circumstand	es" present?		
Are vegetation	, soil	, or hyd	rology	naturally problem	natic?	Yes	s <u>X</u>	No		
						(If needed,	explain any a	answers in Remarks.)		
		ch site map	showing	sampling point lo	ocations, tra	ınsects, in	nportant fea	tures, etc.		
Hydrophytic vegeta		Yes								
Hydric soil present		Yes	X No	Is the samp						
Wetland hydrology	present?	Yes	X No	within a we	tland?	Yes	X	No		
Remarks: (Explain	alternative proc	edures here o	or in a sepa	arate report.)						
HYDROLOGY										
Wetland Hydrolog	y Indicators:				S	econdary lı	ndicators (min	imum of two required)		
Primary Indicators	(minimum of on	e is required;	check all t	hat apply)	•	Surface	e Soil Cracks (B6)		
Surface Water (A1)		Aquat	tic Fauna (B13)	,	Sparse	ely Vegetated 0	Concave Surface (B8)		
High Water Tab	le (A2)		Marl Deposits (B15) (LRR U)			Drainage Patterns (B10)				
Saturation (A3)			Hydro	ogen Sulfide Odor (C1	1)	Moss Trim Lines (B16)				
Water Marks (B	1)		Oxidized Rhizospheres on Living			Dry-Season Water Table (C2)				
Sediment Depos	sits (B2)		Roots			Crayfish Burrows (C8)				
Drift Deposits (E	33)		Prese	ence of Reduced Iron	(C4)	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Cru	ıst (B4)		Recent Iron Reduction in Tilled			X Geomorphic Position (D2)				
Iron Deposits (B	55)		Soils	(C6)	,	Shallow Aquitard (D3)				
Inundation Visib	ole on Aerial Imag	gery (B7)	Thin N	Muck Surface (C7)		X FAC-Neutral Test (D5)				
Water-Stained L	eaves (B9)		Other	(Explain in Remarks)	Sphagnum moss (D8) (LRR T, U)				
Field Observation	s:									
Surface water pres		٨	No X	Depth (inches)		Wetla	and hydrolog	y present?		
Water table presen				Depth (inches)			, ,	•		
Saturation present?				Depth (inches)		Yes	X N	lo		
(includes capillary f										
Describe recorded	data (stream ga	uge, monitori	ng well, as	erial photos, previous	s inspections)	, if availabl	e:			
Remarks:										
I										

VEGETATION -- Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	
1 Liquidambar styraciflua	1	N	FAC	Number of Dominant Species that are OBL, FACW, or FAC: 8 (A)
2			170	
3				Total Number of Dominant Species Across all Strata: 9 (B)
3				
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 88.89% (A/B)
6				
7				Prevalence Index Worksheet
8				Total % Cover of:
		=Total Cove		OBL species <u>30</u> x 1 = <u>30</u>
	.5 20% c	of total cover	0.2	FACW species x 2 = 102
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 20 x 3 = 60
1 Liquidambar styraciflua	6	Y	FAC	FACU species 12 x 4 = 48
2 Quercus phellos	4	Υ	FACW	UPL species 0 _ x 5 = 0
3 Betula nigra	1	N	FACW	Column totals113(A)240(B)
4				Prevalence Index = B/A = 2.12
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				X 3 - Prevalence index is ≤3.0*
	11 :	Total Cove		4 - Morphogical adaptations* (provide
50% of total cover: 5		of total cover		supporting data in Remarks or on a
Herb Stratum (Plot size: 1m ²)			separate sheet)
1 Pluchea camphorata	35	Υ	FACW	Problematic hydrophytic vegetation*
2 Rhynchospora corniculata	10	<u> </u>	OBL	(explain)
3 Eupatorium capillifolium	10	<u> </u>	FACU	
4 Andropogon virginicus	10	<u> </u>	FAC	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
5 Gratiola neglecta	10	<u> </u>	OBL	Definitions of Four Vegetation Strata:
6 Coleataenia rigidula	10	<u> </u>	FACW	Deminions of Your Tegetation Strata.
7 Glyceria striata	10	<u>'</u>	OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8 Solidago altissima	2	<u> </u>	FACU	or more in diameter at breast height (DBH),
9 Cyperus pseudovegetus	1		FACW	regardless of height.
10			TACTI	Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12				equal to 3.28 ft (1 m) tall
12	98	Total Cove		Herb – All herbaceous (non-woody) plants,
50% of total cover: 4		of total cover		regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius	1 2070	total 00VGI		ft tall
1 Smilax rotundifolia	, 1	N	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Berchemia scandens	1	N	FAC	in height.
3 Vitis cinerea	1	N	FAC	in neight.
. 	1	N	<u> </u>	
5				
6		Total Cave		Hydrophytic
F00/ - \$1.4 L		= Total Cove		vegetation
50% of total cover:	2 20% c	of total cover	0.8	present? Yes X No
Damanica (Individe whater combanic	oto sharif			1
Remarks: (Include photo numbers here or on a separ	ate sneet)			

Sampling Point: plot 11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix		Redo	dox Features						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 2	10YR 5/2	98	10YR 3/6	2	С	М	silty clay loam			
2 - 6	10YR 4/2	49	10YR 3/6	2	С	PL	silty clay loam			
	10YR 5/2	49								
6 - 12	10YR 5/2	96	10YR 5/8	2	С	М	loamy clay			
			10YR 3/6	2	С	М				
¹ Type: C =	Concentration, D = D	epletion, RM	I = Reduced Matrix, N	MS = Mask	ed Sand	Grains	s. ² Location: PL :	= Pore Lining, M = Matrix		
	Indicators:	· · ·	Polyvalue Below					olematic Hydric Soils ³ :		
Histisol			(LRR S, T, U)	Surface (C	30)		1 cm Muck (A10	•		
	pipedon (A2)	•	Thin Dark Surfac	ce (S9) (LR	R S, T, I	J)	2 cm Muck (A10			
	listic (A3)	•	 Loamy Mucky M				Reduced Vertic	, ,		
	en Sulfide (A4)	•	Loamy Gleyed M		` ,		(outside MLRA	,		
_ ` `	d Layers (A5)	•	X Depleted Matrix	٠, ,			 -	lplain Soils (F19)		
	Bodies (A6) (LRR F	P, T, U)	· Redox Dark Surf	. ,			(LRR P, S, T)	ipiain oolis (i 19)		
	ucky Mineral (A7) (L		 Depleted Dark S	` ')		 ·	aht Loomy Soile (E20)		
	resence (A8) (LRR l		Redox Depression	•	,		Anomalous Bright Loamy Soils (F20) (MLRA 153B)			
1 cm M	 Marl (F10) (LRR	` '			Red Parent Material (TF12)					
	ed Below Dark Surfac	e (A11)	Depleted Ochric	•	RA 151)		Very Shallow Dark Surface (TF12)			
	ark Surface (A12)	•	— · Iron-Manganese		-		Other (explain i	· · ·		
	Prairie Redox (A16)		(LRR O, P, T)	<u></u>						
(MLRA	, ,	•	Umbric Surface ((F13) (LRF	R P. T. U)				
	, Mucky Mineral (S1)	•	Delta Ochric (F1		-			³ Indicators of hydrophytic vegetation		
(LRR O		•	Reduced Vertic (-	. 150E				
	Gleyed Matrix (S4)	•		and weltand hydrology must be odplain Soils (F19) (MLRA 149A) present, unless disturbed or						
	Redox (S5)	•	—— Anomalous Brigh		. , ,		problematic			
	d Matrix (S6)		(MLRA 149A, 15	•	•	,,	•			
	urface (S7) (LRR P, S	S. T. U)		,,						
Restrictive	Layer (if observed)):								
Type:										
Depth (inch	es):			Hydric soi	l presen	t?	Yes X	No		
Remarks:										
r torriarito.										

Project/Site	Moro Creek Miti	gation Bank	Cit	y/County:	Bunn	Samp	oling Date:	2018/09/11		
Applicant/Owner:	Arkansas Department of Transportation					ling Point:	plot 12			
Investigator(s):	Section, Township, Range: T8S R14W S24									
Landform (hillslope	, terrace, etc.):	!	none	Local re	elief (concave, c	onvex, none	e):	none		
Slope (%): 0	Lat:			Long:		Datur	n:	WGS84		
Soil Map Unit Name	е	Wehadke	e silt loam		NWI Clas	sification:		PFO1A		
Are climatic/hydrolo	gic conditions of t	the site typical	for this time	of the year? Ye	es X No_	(I	f no, explain	in remarks)		
Are vegetation	, soil	, or hydrol	ogysi	ignificantly distu	rbed? A	re "normal c	circumstance	s" present?		
Are vegetation	, soil	, or hydrol	ogyna	aturally problem	atic?	Yes	X	lo		
					(II	f needed, ex	plain any an	swers in Remarks.)		
SUMMARY OF FI	NDINGS - Attacl	h site map s	nowing san	npling point lo	ocations, trans	sects, impo	ortant featu	res, etc.		
Hydrophytic vegeta	· ·	Yes X	No	_						
Hydric soil present?		Yes X	No	Is the samp						
Wetland hydrology	present?	Yes X	No	within a we	tland?	Yes	<u>X N</u>	lo		
HYDROLOGY										
Wetland Hydrolog	-				Sec		•	num of two required)		
Primary Indicators (minimum of one is	s required; ch	eck all that a	ipply)	_		oil Cracks (B	·		
Surface Water (A1)	_	Aquatic Fa			Sparsely \	/egetated Co	ncave Surface (B8)		
High Water Tab	e (A2)	_	_	osits (B15) (LRR		Drainage Patterns (B10)				
Saturation (A3)		_	Hydrogen \$	Sulfide Odor (C1		Moss Trim Lines (B16)				
Water Marks (B			Oxidized R	Rhizospheres on	Living	Dry-Season Water Table (C2)				
Sediment Depos		_	Roots (C3)	•	_		Burrows (C8)			
Drift Deposits (B	-	_	Presence of	of Reduced Iron	· · · · · · · · · · · · · · · · · · ·	_		erial Imagery (C9)		
Algal Mat or Cru				n Reduction in T	illed <u> </u>		nic Position (D	02)		
Iron Deposits (B	•	_	Soils (C6)		_	_	quitard (D3)			
	le on Aerial Imager	y (B7)		Surface (C7)		X FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)				
Water-Stained L	.eaves (B9)	_	Other (Exp	olain in Remarks)	<u> </u>	Sphagnur —	n moss (D8) (LRR T, U)		
Field Observation	s:									
Surface water pres	ent? Yes _	No	X Dept	h (inches)		Wetland	d hydrology	present?		
Water table presen	t? Yes _	No.	X Dept	h (inches)						
Saturation present?	Yes _	No.	X Dept	h (inches)		Yes X	No			
(includes capillary f	ringe)									
Describe recorded	data (stream gaug	je, monitoring	well, aerial p	ohotos, previous	s inspections), it	f available:				
Demonto										
Remarks:										

EGETATION Use scientific names of plar	ıts.			Sampling Point:plot 12
	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	Number of Dominant Species
1 Carpinus caroliniana	2	Υ	FAC	that are OBL, FACW, or FAC: 5 (A)
2 Quercus nigra	2	Y	FAC	Total Number of Dominant
3 Liquidambar styraciflua	1	N	FAC	Species Across all Strata: 5 (B)
4 Acer rubrum	1	N	FAC	Percent of Dominant Species
5 Prunus serotina	1	N	FACU	that are OBL, FACW, or FAC: 100.00% (A/B)
6				
7				Prevalence Index Worksheet
8				Total % Cover of:
·	7 :	= Total Cove	er	OBL species 6 x 1 = 6
50% of total cover: 3		of total cover		FACW species 59 x 2 = 118
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 50 x 3 = 150
1 Carpinus caroliniana	, 10	Υ	FAC	FACU species 7 x 4 = 28
2 Liquidambar styraciflua	2	N	FAC	UPL species 0 x 5 = 0
3 Quercus phellos	1		FACW	Column totals 122 (A) 302 (B)
4			17011	Prevalence Index = B/A = 2.48
5				Hydrophytic Vegetation Indicators:
5 6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				X 3 - Prevalence index is ≤3.0*
8	12	= Total Cove		
50% of total cover: 6		= rotal Cove of total cove		4 - Morphogical adaptations* (provide
Herb Stratum (Plot size: 1m ²	.5 2070 C)i lulai covei	2.0	supporting data in Remarks or on a separate sheet)
1 Coleataenia rigidula) 35	Y	FACW	Problematic hydrophytic vegetation*
	12	N		(explain)
2 Boehmeria cylindrica 3 Dichanthelium dichotomum	8	N	FACW FAC	 ` ' '
	6		OBL	*Indicators of hydric soil and wetland hydrology must be
4 Gratiola neglecta 5 Mikania scandens	5	N	FACW	present, unless disturbed or problematic
	4			Definitions of Four Vegetation Strata:
6 Pluchea camphorata		N	FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
7 Eupatorium capillifolium	4	N	FACU	or more in diameter at breast height (DBH),
8 Dichanthelium commutatum	2	N	FAC	regardless of height.
9 Hypericum mutilum	2	N	FACU	
0 Solidago altissima	2	N	FACU	Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or
1 Acalypha gracilens	2	N	FAC	equal to 3.28 ft (1 m) tall
2 Andropogon virginicus	2	<u>N</u>	FAC	, ,
500/ -ft-t-l		= Total Cove		Herb – All herbaceous (non-woody) plants,
	12 20% c	of total cover	r: 16.8	regardless of size, and woody plants less than 3.28 ft tall
Woody Vine Stratum (Plot size: 15-m radius)	.,	-10	
1 Vitis cinerea	15	<u>Y</u>	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Vitis rotundifolia	3	N	FAC	in height.
3				
4				
5				
6				Hydrophytic
		= Total Cove		vegetation
50% of total cover:	9 20% c	of total cover	r: 3.6	present? Yes X No
emarks: (Include photo numbers here or on a separ	,			
Herbaceous layer als	so include	s Callicar	pa americ	ana (FACU) at 1%.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix		Redo	x Feature	S					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 3	10YR 4/2	98	10YR 4/6	2	С	PL	silty clay loam			
3 - 6	10YR 4/2	58	10YR 3/6	2	С	М	silty clay loam			
	10YR 5/2	38	10YR 5/8	2	С	М	, ,			
6 - 12	10YR 5/2	96	10YR 4/6	2	С	М	silty clay loam			
			10YR 3/6	2	С	М	,,			
¹ Type: C = (Concentration D = D	enletion RM	1 = Reduced Matrix, I	MS = Mask	ced Sand	Grains	² l ocation: PL = Po	ore Lining, M = Matrix		
	Indicators:	repletion, raiv				Oranic	Indicators for Problem			
Histisol			Polyvalue Below (LRR S, T, U)	Surface (S8)		1 cm Muck (A10) (L	-		
_	pipedon (A2)	•	Thin Dark Surfac	ce (S9) (LF	RR S. T. L	J)	2 cm Muck (A10) (L	-		
_	istic (A3)	•	Loamy Mucky M					•		
	en Sulfide (A4)	•	Loamy Gleyed M		,,		Reduced Vertic (F1 (outside MLRA 15)	,		
	d Layers (A5)	•	X Depleted Matrix				 `	•		
	: Bodies (A6) (LRR P	. T II\	Redox Dark Surf	` '			Piedmont Floodplai (LRR P, S, T)	n Soils (F19)		
— ·	ucky Mineral (A7) (L l	· · · · ·	Depleted Dark S	, ,	٠,		 '	/		
		· •	<u> </u>	•)			Anomalous Bright Loamy Soils (F20)		
	resence (A8) (LRR U	")	Redox Depression	. ,			 '	_ (MLRA 153B) 		
	uck (A9) (LRR P. T)	(Δ11)	Marl (F10) (LRR	-	DA 454\			Red Parent Material (TF12) Very Shallow Dark Surface (TF12)		
	d Below Dark Surfac	e (ATT)	Depleted Ochric							
	ark Surface (A12)		•	se Masses (F12) Other (explain in remarks)						
	rairie Redox (A16)	•	(LRR O, P, T)	ee (F13) (LRR P, T, U)						
(MLRA	•	•		F17) (MLRA 151)						
_	Mucky Mineral (S1)	•			-	4505	³ Indicators of hydro	³ Indicators of hydrophytic vegetation and weltand hydrology must be		
(LRR O	· ·	•	Reduced Vertic (. , .						
·	Gleyed Matrix (S4)	•	Piedmont Floodp		urbed or					
	Redox (S5)		Anomalous Brigh	•	•))	problematic			
	d Matrix (S6)		(MLRA 149A, 15	3C, 153D)					
Dark St	ırface (S7) (LRR P, S	S, T, U)								
Restrictive	Layer (if observed)	:								
Type:	.,									
	es):			Hydric soi	il present	t?	Yes X	No		
	, <u> </u>				<u> </u>					
Remarks:										

Project/Site	Moro Creek Mitigation Bank City			/County: Bunn		Sampling Date	e: 2018/09/11			
Applicant/Owner:	Arkansas Department of Transportation		n State:	AR	Sampling Poin	it: plot 13				
Investigator(s):	Kayti Ew	ing, Joe Led	vina	Section,	Γownship, Raι	nge:				
Landform (hillslope	, terrace, etc.):	ne	one	Local relief	(concave, co	nvex, none):	none			
Slope (%): 0	Lat:			Long:		Datum:	WGS84			
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Classi	fication:	PFO1A			
Are climatic/hydrolo	ogic conditions of th	e site typical f	for this time o	of the year? Yes	X No	(If no, exp	lain in remarks)			
Are vegetation						"normal circumsta	nces" present?			
Are vegetation	, soil	, or hydrolo	igynat	urally problemation		Yes X	No			
						-	y answers in Remarks.)			
SUMMARY OF FI			owing samp	oling point loca	tions, transe	ects, important fe	atures, etc.			
Hydrophytic vegeta	*	Yes X	No							
Hydric soil present?		Yes X	No	Is the sampled						
Wetland hydrology	present?	Yes X	No	within a wetlar	nd?	Yes <u>X</u>	No			
Remarks: (Explain	alternative procedu	res here or in	a separate re	eport.)						
HYDROLOGY										
Wetland Hydrolog	· -	roquirod: obo	ak all that an	alv)	Seco		ninimum of two required)			
Primary Indicators (required, che				Surface Soil Cracks				
Surface Water (•		_Aquatic Faur			_	parsely Vegetated Concave Surface (B8)			
High Water Tabl	le (A2)		Marl Deposits (B15) (LRR U)			Drainage Patterns (B10)				
Saturation (A3)			Hydrogen Sulfide Odor (C1)			Moss Trim Lines (B16)				
Water Marks (B			Oxidized Rhizospheres on Living			Dry-Season Water Table (C2)				
Sediment Depos			Roots (C3) Presence of Reduced Iron (C4)			Crayfish Burrows (C8)				
Drift Deposits (B	-		Presence of	Reduced Iron (C4		Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Cru	` '			Reduction in Tilled		X Geomorphic Position (D2)				
Iron Deposits (B	•	(D7)	Soils (C6)	Surface (C7)		Shallow Aquitard (D				
	ole on Aerial Imagery	(D7)	Thin Muck S			FAC-Neutral Test (I	•			
Water-Stained L	.eaves (b9)		Other (Explain in Remarks)			Sphagnum moss (D8) (LRR T, U)				
Field Observation										
Surface water pres		No	X Depth	· · · · · · · · · · · · · · · · · · ·		Wetland hydrolo	ogy present?			
Water table presen	_	No	X Depth							
Saturation present?		No	X Depth	(inches)	Y	es X	No			
(includes capillary f										
Describe recorded	data (stream gauge	, monitoring v	vell, aerial ph	otos, previous in:	spections), if a	available:				
<u> </u>										
Remarks:										

VEGETATION -- Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	Number of Dominant Species
1		•		that are OBL, FACW, or FAC: 1 (A)
2				` '
3				Total Number of Dominant Species Across all Strata: 1 (B)
3	_			' '
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 100.00% (A/B)
6				
7				Prevalence Index Worksheet
8				Total % Cover of:
		Total Cove		OBL species x 1 = 0
50% of total cover:	20% (of total cover	r:	FACW species 103 x 2 = 206
Sapling/Shrub Stratun (Plot size: 15-m radius	_)			FAC species 3 x 3 = 9
1 Quercus phellos	1	N	FACW	FACU species 12 x 4 = 48
2				UPL species 0 x 5 = 0
3				Column totals 118 (A) 263 (B)
4				Prevalence Index = $B/A = 2.23$
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
0	_			l ——
0		T + 10		X 3 - Prevalence index is ≤3.0*
500/ 64 4 4		Total Cove		4 - Morphogical adaptations* (provide
	0.5 20% c	of total cover	r: 0.2	supporting data in Remarks or on a
Herb Stratum (Plot size: 1m²	_)			separate sheet)
1 Panicum verrucosum	100	<u> </u>	FACW	Problematic hydrophytic vegetation*
2 Scoparia dulcis	12	N		(explain)
3 Perilla frutescens	10	N	FACU	*Indicators of hydric soil and wetland hydrology must be
4 Mikania scandens	2	N	FACW	present, unless disturbed or problematic
5 Eupatorium capillifolium	2	N	FACU	Definitions of Four Vegetation Strata:
6				
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8				or more in diameter at breast height (DBH),
9				regardless of height.
10				Sapling/Shrub – Woody plants, excluding
11	_			vines, less than 3 in. DBH and greater than or
	_			equal to 3.28 ft (1 m) tall
12				
500/ 64 4 4		Total Cove		Herb – All herbaceous (non-woody) plants,
	20% (of total cover	r: 25.2	regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius	_)			ft tall
1 Vitis rotundifolia	2	N	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Vitis cinerea	1	N	FAC	in height.
3				
4				
5				
6				Hydrophytic
	3	Total Cove	er	vegetation
50% of total cover:	1.5 20%	of total cover	r: 0.6	present? Yes X No
				'
Remarks: (Include photo numbers here or on a sepa	arate sheet\			1
Tomano. (moidde photo humbers here of off a sept	arate srieet)			

Sampling Point: plot 13

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r confi	irm the absence of ind	icators.)			
Depth	Matrix		Redo	ox Feature:	s						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 2	10YR 4/2	59	10YR 4/6	2	С	М	silty clay loam				
	10YR 5/2	39									
2 - 6	10YR 5/2	98	10YR 5/8	2	С	PL	silty clay loam				
6 - 12	10YR 5/2	96	10YR 5/8	2	С	М	sandy clay				
			10YR 3/4	2	С	М					
¹ Type: C = 0	Concentration. D = D	epletion. RM	I = Reduced Matrix, I	⊥ MS = Masł	⊥ ked Sand	Grains	s. ² Location: PL = Po	ore Lining, M = Matrix			
	Indicators:						Indicators for Problem				
Histisol			Polyvalue Below (LRR S, T, U)	Surface (58)		1 cm Muck (A10) (I	•			
	pipedon (A2)	-	Thin Dark Surfac	ce (S9) (LF	RR S. T. U	J)	2 cm Muck (A10) (I	•			
_	istic (A3)	-	 Loamy Mucky M			-	Reduced Vertic (F1	•			
	en Sulfide (A4)	-	Loamy Gleyed M		,		(outside MLRA 15				
— · ·	d Layers (A5)	-	X Depleted Matrix	, ,			—— ` Piedmont Floodplai				
	Bodies (A6) (LRR F	P, T, U)	Redox Dark Surf	face (F6)			(LRR P, S, T)	11 00110 (1 10)			
5 cm Mi	ucky Mineral (A7) (L l	RR P, T, U)	Depleted Dark S	Surface (F7	·)		—— Anomalous Bright I	Anomalous Bright Loamy Soils (F20)			
Muck Presence (A8) (LRR U) Redox De				ons (F8)			(MLRA 153B)	_(MLRA 153B)			
1 cm Muck (A9) (LRR P. T) Marl (F10				U)			Red Parent Materia	al (TF12)			
Depleted Below Dark Surface (A11) Depleted Oc				(F11) (ML	RA 151)		Very Shallow Dark	Surface (TF12)			
Thick D	ark Surface (A12)	_	 Iron-Manganese	Masses (F	F12)		Other (explain in re	emarks)			
Coast P	rairie Redox (A16)	_	(LRR O, P, T)		•						
(MLRA	150A)	_	Umbric Surface	mbric Surface (F13) (LRR P, T, U)							
Sandy N	Mucky Mineral (S1)	_	Delta Ochric (F1	7) (MLRA	151)	31	³ Indicators of hydrophytic vegetation				
(LRR O	, S)	_	Reduced Vertic				and weltand hydrol	and weltand hydrology must be			
Sandy (Gleyed Matrix (S4)	-	Piedmont Flood	olain Soils	(F19) (MI	LRA 14	problematic				
	Redox (S5)		Anomalous Brigh)					
	d Matrix (S6)	-	(MLRA 149A, 1	53C, 153D)						
Dark Su	ırface (S7) (LRR P, S	S, T, U)									
Restrictive	Layer (if observed)) <u>:</u>									
Туре:	,										
Depth (inch	es):			Hydric soi	il presen	t?	Yes X	No			
Remarks:											
1											

Project/Site	Moro Creek Mitig	ation Bank	City/	County: Bunn		Sampling	Sampling Date: 2018/09	
Applicant/Owner:	Arkansas Dep	artment of T	ransportatio	on State:	AR	Sampling	Point:	Plot 14
Investigator(s):	Kayti Ew	ring, Joe Led	lvina	Section, Township, Range: T				4W S24
Landform (hillslope	, terrace, etc.):	n	one	Local relief	(concave, cor	nvex, none):_		none
Slope (%): 0	Lat:			Long:		Datum:	,	WGS84
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Classif	fication:	PI	FO1A
Are climatic/hydrolo	ogic conditions of th	e site typical	for this time of	of the year? Yes	X No	(If no	, explain in	remarks)
Are vegetation	, soil	, or hydrolo	ogysigi	nificantly disturbe	d? Are	"normal circu	mstances"	present?
Are vegetation	, soil	, or hydrolo	ogynat	urally problemation		Yes X		
						-	=	vers in Remarks.)
SUMMARY OF FI			owing samp	oling point loca	tions, transe	cts, importa	nt feature	s, etc.
Hydrophytic vegeta	*	Yes X	No					
Hydric soil present?		Yes X	_ No	Is the sampled				
Wetland hydrology	present?	Yes X	No	within a wetlar	1d? \	Yes X	No	
Remarks: (Explain	· 		·	,				
HYDROLOGY								
Wetland Hydrolog	· -				Secor	ndary Indicato	rs (minimu	m of two required)
Primary Indicators ((minimum of one is	required; che	ck all that ap	ply)		Surface Soil C	cracks (B6)	
Surface Water (A1)		_Aquatic Faur			Sparsely Vege	etated Conc	cave Surface (B8)
High Water Tab	le (A2)		_Marl Deposi	its (B15) (LRR U)		Drainage Patte	erns (B10)	
Saturation (A3)			_Hydrogen Su	ulfide Odor (C1)		Moss Trim Lin	es (B16)	
Water Marks (B	1)			izospheres on Livi	ng	Dry-Season W	√ater Table	(C2)
Sediment Depos			Roots (C3)			Crayfish Burro		
Drift Deposits (B	-		Presence of	Reduced Iron (C4		•		al Imagery (C9)
Algal Mat or Cru	` '			Reduction in Tilled		Geomorphic P)
Iron Deposits (B	•		Soils (C6)			Shallow Aquita		
	le on Aerial Imagery	(B7)	Thin Muck S			FAC-Neutral T	` ,	
Water-Stained L	.eaves (B9)		Other (Expla	in in Remarks)		Sphagnum mo	oss (D8) (LF	RR T, U)
Field Observation	s:							
Surface water pres	ent? Yes	No	X Depth	(inches)		Wetland hy	drology pr	resent?
Water table presen	t? Yes _	No	X Depth	(inches)				
Saturation present?	? Yes _	No	X Depth	(inches)	Ye	es X	No	
(includes capillary f	ringe)							
Describe recorded	data (stream gauge	, monitoring v	well, aerial ph	notos, previous ins	spections), if a	ıvailable:		
Remarks:								

Sapling/Shrub Stratun (Plot size: 15-m radius)

(Plot size: 30-m radius)

50% of total cover:

50% of total cover:

50% of total cover:

(Plot size: 15-m radius)

(Plot size:

1m²

Tree Stratum

3

2

3

4

7

2

3

4

5

7

9

10

4 5 6

Herb Stratum

1 Liquidambar styraciflua

1 Liquidambar styraciflua

Carpinus caroliniana

Hamamelis virginiana

Callicarpa americana

Diospyros virginiana

1 Panicum verrucosum

Boehmeria cylindrica

Eupatorium capillifolium

Hypericum mutilum

Carpinus caroliniana

Ipomoea sp.

Woody Vine Stratum Rubus laudatus

Vitis rotundifolia

Lonicera japonica

Smilax glauca

Cephalanthus occidentalis

Quercus texana

Absolute

% Cover

15

15

30

1

1

1

1

85

40

6

4

0

126

1

1

42.5

7.5

Dominant

Species

= Total Cover

Ν

Ν

Ν

Ν

= Total Cover

Ν

Ν

Ν

= Total Cover

Ν

20% of total cover: **25.2**

20% of total cover:

20% of total cover:

Indicator

Staus

FAC

FAC

FAC

FACW

OBL

FACU

FACU

FAC

17

FACW

FACW

FACW

FACU

FAC

FAC

FAC

FACU

2.2

	11		= Total Cov	/er
50% of total cover: 5.5	2	0% (of total cov	er:
Remarks: (Include photo numbers here or on a separat	te she	et)		
Herbaceous cover of Carpinus car	olini	ana	was not	esti
·				

0 - 4	Profile Des	cription: (Describe	to the dept	h needed to docum	ent the inc	dicator o	r confi	rm the absence of ir	ndicators.)		
Color (moist)	Depth	Redo	ox Features	S							
1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. 1-Type: C = Concentration, D = Depletion, RM = Reduced Matrix Reduced Sand Grains. 1-Type: C = Concentration. 1-Type: C = Concent	(Inches)	Color (moist)	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains.	0 - 4	10YR 3/2	98	10YR 3/6	2	С	M	silty clay loam			
Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix Indicators for Problematic Hydric Soils*: Histisol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Som Mucky Mineral (A7) (LRR P, T, U) Coast Prairie Redox (A16) (MLRA 150A) Depleted Delow Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S9) (LRR P, T, U) Depleted Dark Surface (F12) (MLRA 159A, B) Piedmont Floodplain Soils (F19) (MLRA 150A, B) Piedmont Floodplain Soils (F19) (MLRA 150A, B) Piedmont Floodplain Soils (F19) (MLRA 150A, B) Red Parent Material (TF12) Very Shallow Dark Surface (TF12) Other (explain in remarks) Other (explain in remarks) Anomalous Bright Loamy Soils (F20) (MLRA 159A, 150C, 153D) Piedmont Floodplain Soils (F19) (MLRA 149A, 153C, 153D) Reduced Vertic (F18) (MLRA 150A, 150C, 153D) Piedmont Floodplain Soils (F19) (MLRA 159A, 150C, 153D) Piedmont Floodplain Soils (F19) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No	4 - 12	10YR 3/2	59	10YR 3/6	2	C	М	silty clay loam			
Hydric Soil Indicators: Histisol (A1) Histisol (A2) Histisol (A3) Histisol (A3) Hydrogen Sulfiade (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Mucky Presence (A8) (LRR P, T, U) Thin Dark Surface (F7) Muck Presence (A8) (LRR P, T) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (F3) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF12) Very Shallow Dark Surface (TF12) Thick Dark Surface (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, P, T) (LRR O, P, T) (LRR O, P, T) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S7) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Dark Surface (A16) (MLRA 149A, 153C, 153D) Indicators for Problematic Hydric Soils ³ : 1 cm Muck (A10) (LRR O) Reduced Vertic (F18) (Mura 150A, B) Reduced Vertic (F18) (MLRA 150A, B) Pledmont Floodplain Soils (F10) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 150A, 150E) Sandy Redox (S5) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No		10YR 4/2	39								
Hydric Soil Indicators: Histisol (A1) Histisol (A2) Histisol (A3) Histisol (A3) Hydrogen Sulfiade (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Mucky Presence (A8) (LRR P, T, U) Thin Dark Surface (F7) Muck Presence (A8) (LRR P, T) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (F3) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF12) Very Shallow Dark Surface (TF12) Thick Dark Surface (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, P, T) (LRR O, P, T) (LRR O, P, T) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S7) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Dark Surface (A16) (MLRA 149A, 153C, 153D) Indicators for Problematic Hydric Soils ³ : 1 cm Muck (A10) (LRR O) Reduced Vertic (F18) (Mura 150A, B) Reduced Vertic (F18) (MLRA 150A, B) Pledmont Floodplain Soils (F10) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 150A, 150E) Sandy Redox (S5) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No											
Hydric Soil Indicators: Histisol (A1) Histisol (A2) Histisol (A3) Histisol (A3) Hydrogen Sulfiade (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Mucky Presence (A8) (LRR P, T, U) Thin Dark Surface (F7) Muck Presence (A8) (LRR P, T) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (F3) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF12) Very Shallow Dark Surface (TF12) Thick Dark Surface (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, P, T) (LRR O, P, T) (LRR O, P, T) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S7) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Dark Surface (A16) (MLRA 149A, 153C, 153D) Indicators for Problematic Hydric Soils ³ : 1 cm Muck (A10) (LRR O) Reduced Vertic (F18) (Mura 150A, B) Reduced Vertic (F18) (MLRA 150A, B) Pledmont Floodplain Soils (F10) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 150A, 150E) Sandy Redox (S5) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No											
Hydric Soil Indicators: Histisol (A1) Histisol (A2) Histisol (A3) Histisol (A3) Hydrogen Sulfiade (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Mucky Presence (A8) (LRR P, T, U) Thin Dark Surface (F7) Muck Presence (A8) (LRR P, T) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (F3) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF12) Very Shallow Dark Surface (TF12) Thick Dark Surface (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, P, T) (LRR O, P, T) (LRR O, P, T) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S7) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Dark Surface (A16) (MLRA 149A, 153C, 153D) Indicators for Problematic Hydric Soils ³ : 1 cm Muck (A10) (LRR O) Reduced Vertic (F18) (Mura 150A, B) Reduced Vertic (F18) (MLRA 150A, B) Pledmont Floodplain Soils (F10) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 150A, 150E) Sandy Redox (S5) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No											
Hydric Soil Indicators: Histisol (A1) Histisol (A2) Histisol (A3) Histisol (A3) Hydrogen Sulfiade (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Mucky Presence (A8) (LRR P, T, U) Thin Dark Surface (F7) Muck Presence (A8) (LRR P, T) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (F3) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF12) Very Shallow Dark Surface (TF12) Thick Dark Surface (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, P, T) (LRR O, P, T) (LRR O, P, T) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S7) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Dark Surface (A16) (MLRA 149A, 153C, 153D) Indicators for Problematic Hydric Soils ³ : 1 cm Muck (A10) (LRR O) Reduced Vertic (F18) (Mura 150A, B) Reduced Vertic (F18) (MLRA 150A, B) Pledmont Floodplain Soils (F10) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 150A, 150E) Sandy Redox (S5) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No											
Hydric Soil Indicators: Histisol (A1) Histisol (A2) Histisol (A3) Histisol (A3) Hydrogen Sulfiade (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Mucky Presence (A8) (LRR P, T, U) Thin Dark Surface (F7) Muck Presence (A8) (LRR P, T) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (F3) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF12) Very Shallow Dark Surface (TF12) Thick Dark Surface (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, P, T) (LRR O, P, T) (LRR O, P, T) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S7) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Dark Surface (A16) (MLRA 149A, 153C, 153D) Indicators for Problematic Hydric Soils ³ : 1 cm Muck (A10) (LRR O) Reduced Vertic (F18) (Mura 150A, B) Reduced Vertic (F18) (MLRA 150A, B) Pledmont Floodplain Soils (F10) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 150A, 150E) Sandy Redox (S5) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No											
Hydric Soil Indicators: Histisol (A1) Histisol (A2) Histisol (A3) Histisol (A3) Hydrogen Sulfiade (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Mucky Presence (A8) (LRR P, T, U) Thin Dark Surface (F7) Muck Presence (A8) (LRR P, T) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (F3) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Muck Presence (A8) (LRR P, T) Depleted Dark Surface (F7) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF12) Very Shallow Dark Surface (TF12) Thick Dark Surface (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, P, T) (LRR O, P, T) (LRR O, P, T) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S7) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Dark Surface (A16) (MLRA 149A, 153C, 153D) Indicators for Problematic Hydric Soils ³ : 1 cm Muck (A10) (LRR O) Reduced Vertic (F18) (Mura 150A, B) Reduced Vertic (F18) (MLRA 150A, B) Pledmont Floodplain Soils (F10) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 150A, 150E) Sandy Redox (S5) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No											
Hydric Soil Indicators: Histisol (A1) Histisol (A2) Histisol (A3) Histisol (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Mucky Presence (A8) (LRR P, T, U) Thin Dark Surface (F1) (MLRA 150A) Polyagen Bodies (A6) (LRR P, T, U) Depleted Dark Surface (F7) Mucky Presence (A8) (LRR P, T) Thick Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (F3) Depleted Dark Surface (F6) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF12) Very Shallow Dark Surface (TF12) Thick Dark Surface (A11) Thick Dark Surface (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, P, T) (LRR O, P, T) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Depleted Dark Surface (A12) (LRR O, P, T) (MLRA 150A) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No	¹ Type: C = (Concentration, D = D	epletion, RM	I = Reduced Matrix,	⊔ MS = Mask	ed Sand	Grains	Location: PL =	Pore Lining, M = Matrix		
Histisol (A1) (LRR S, T, U) 1 cm Muck (A10) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, B) Stratified Layers (A5) X Depleted Matrix (F2) (LRR P, S, T) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) (LRR P, S, T) Muck Presence (A8) (LRR P, T, U) Depleted Dark Surface (F7) Anomalous Bright Loamy Soils (F20) (MLRA 153B) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Redox Depressions (F8) (MLRA 153B) 1 cm Muck (A9) (LRR P, T) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (TF12) Thick Dark Surface (A12) Iron-Manganese Masses (F12) Other (explain in remarks) Coast Prairie Redox (A16) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Sandy Mucky Mineral (S1) (LRR O, S) Reduced Vertic (F18) (MLRA 1510) Anomalous Bright Loamy Soils (F20) Other (explain in remarks) Sandy Redox (S5) Anomalous Bright Loamy Soils (F20) (MLRA 149A) (T50) (MLRA 14											
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) Thin Dark Surface (F6) Marl (F10) (LRR U) Thick Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O) Thin Dark Surface (S9) (LRR S, T, U) Depleted Dark Surface (F6) Marl (F10) (LRR P, S, T) Depleted Dark Surface (F7) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Thin Dark Surface (A11) Depleted Dark Surface (F6) (MLRA 153B) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Thin Dark Surface (A11) Depleted Dark Surface (F7) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Other (explain in remarks) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 150A, 150t Sandy Gleyed Matrix (S4) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No	1 -				V Surface (30)			-		
Black Histic (A3)		•	=		ce (S9) (LF	RRS, T, L	J)				
Hydrogen Sulfide (A4) Stratified Layers (A5) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Stratified Layers (A5) Mark Oy (LRR P, T, U) Depleted Dark Surface (F7) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF12) Very Shallow Dark Surface (TF12) Other (explain in remarks) Other (explain in remarks) Other (explain in remarks) Other (explain in remarks) Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No			=				-				
Organic Bodies (A6) (LRR P, T, U) From Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Muck Presence (A8) (LRR U) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF12) Very Shallow Dark Surface (TF12) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 150) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No	Hydroge	en Sulfide (A4)	-	Loamy Gleyed N	Matrix (F2)			•	•		
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (LRR P, S, T) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Anomalous Bright Loamy Soils (F20) Muck Presence (A8) (LRR U) Redox Depressions (F8) (MLRA 153B) 1 cm Muck (A9) (LRR P. T) Marl (F10) (LRR U) Red Parent Material (TF12) X Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (TF12) Thick Dark Surface (A12) Iron-Manganese Masses (F12) Other (explain in remarks) Coast Prairie Redox (A16) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Sandy Mucky Mineral (S1) (LRR O, S) Reduced Vertic (F18) (MLRA 150A, 150t Anomalous Bright Loamy Soils (F19) (MLRA 149A) Sandy Redox (S5) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Stripped Matrix (S6) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No	Stratifie	d Layers (A5)	-	X Depleted Matrix	(F3)		-	Piedmont Floodp	lain Soils (F19)		
Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P. T) Marl (F10) (LRR U) Pepleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Redox Depressions (F8) (MLRA 153B) Redox Depressions (F8) (MLRA U) Redox Depressions (F8) (MLRA U) Red Parent Material (TF12) Very Shallow Dark Surface (TF12) Other (explain in remarks) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E Piedmont Floodplain Soils (F19) (MLRA 149A) Piedmont Floodplain Soils (F19) (MLRA 149A) Present, unless disturbed or problematic (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No	Organic	Bodies (A6) (LRR P	P, T, U)	Redox Dark Sur	face (F6)		_		,		
1 cm Muck (A9) (LRR P. T) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Red Parent Material (TF12) Very Shallow Dark Surface (TF12) Other (explain in remarks) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150t Piedmont Floodplain Soils (F19) (MLRA 149A) Present, unless disturbed or problematic (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No	5 cm Mı	ucky Mineral (A7) (Ll	RR P, T, U)	Depleted Dark S	Surface (F7)		Anomalous Brigh	t Loamy Soils (F20)		
Thick Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (TF12) Other (explain in remarks) Indicators of hydrophytic vegetation and weltand hydrology must be Piedmont Floodplain Soils (F19) (MLRA 149A, 150E, 151B) Present, unless disturbed or problematic (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No	Muck Pi	resence (A8) (LRR L	Redox Depressi	ons (F8)		_	(MLRA 153B)				
Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Iron-Manganese Masses (F12) Other (explain in remarks) Iron-Manganese Masses (F12) Other (explain in remarks) Other (explain in remarks) Iron-Manganese Masses (F12) Other (explain in remarks) Other (explain in remarks)	1 cm Muck (A9) (LRR P. T) Marl (F10)				R U)		_	Red Parent Mate	rial (TF12)		
Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E Piedmont Floodplain Soils (F19) (MLRA 149A) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Hydric soil present? Yes X No					(F11) (ML	RA 151)	_	Very Shallow Dar	k Surface (TF12)		
(MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E Anomalous Bright Loamy Soils (F19) (MLRA 149A) present, unless disturbed or problematic (MLRA 149A, 153C, 153D) Hydric soil present? Yes X No	Thick D	ark Surface (A12)		Iron-Manganese	Masses (F	- 12)	-	Other (explain in	remarks)		
Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E Piedmont Floodplain Soils (F19) (MLRA 149A) Piedmont Floodplain Soils (F19) (MLRA 149A) Piedmont Floodplain Soils (F20) MLRA 149A, 153C, 153D) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No			-								
(LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Reduced Vertic (F18) (MLRA 150A, 150E Piedmont Floodplain Soils (F19) (MLRA 149A) Piedmont Floodplain Soils (F19) (MLRA 149A) Piedmont Floodplain Soils (F20) Piedmont Floodplain Soils (F20) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Problematic Type: Hydric soil present? Yes X No	(MLRA	150A)	-)				
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Reduced Vertic (F18) (MLRA 130A, 130F and weltand hydrology must be Piedmont Floodplain Soils (F19) (MLRA 149A) present, unless disturbed or problematic Anomalous Bright Loamy Soils (F20) problematic (MLRA 149A, 153C, 153D) Hydric soil present? Yes X No			_			-		³ Indicators of hyd	and weltand hydrology must be		
Sandy Redox (S5) Anomalous Bright Loamy Soils (F20) Problematic (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No	— `	•	-					and weltand hydr			
Stripped Matrix (S6)(MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? YesX No		• , ,	-	Piedmont Flood	plain Soils	(F19) (ML	_RA 14	A) present, unless disturbed or			
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No No				_	-))	problematic			
Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No		` '	- -	(IVILKA 149A, 1	53C, 153D	,					
Type: Hydric soil present? Yes X No	Dark Su	Irrace (S7) (LRR P, S	5, 1, 0)								
Depth (inches): Hydric soil present? Yes X No	Restrictive	Layer (if observed)):								
	Туре:										
Remarks:	Depth (inche	es):			Hydric soi	l present	t?	Yes X	No		
	Remarks:										
	i temants.										

Project/Site	Moro Creek Mitig	jation Bank	Ci	ty/County:	Bunn	Samp	ling Date:	2018/09/11
Applicant/Owner:	Arkansas Dej	partment of	Transporta	tion State:	AR	Sampl	ling Point:	Plot 15
Investigator(s):	Kayti Ev	ving, Joe Le	edvina	Section,	Township, F	Range:	T8S I	R14W S24
Landform (hillslope,	terrace, etc.):		none	Local relie	ef (concave,	convex, none):	none
Slope (%): 0	Lat:			Long:		Datun	າ:	WGS84
Soil Map Unit Name	<u> </u>	Wehadke	e silt loam		NWI Clas	ssification:		PFO1A
Are climatic/hydrolo	gic conditions of the	ne site typica	al for this tim	e of the year? Yes	X No	(I1	no, explain	n in remarks)
Are vegetation	, soil	, or hydro	ologys	significantly disturb	ed? A	Are "normal ci	rcumstance	s" present?
Are vegetation	, soil	, or hydro	ologyr	naturally problema	tic?	Yes_	<u>X</u> 1	No
					-		-	nswers in Remarks.)
SUMMARY OF FI		site map s	showing sa	mpling point loc	ations, tran	sects, impo	rtant featu	ıres, etc.
Hydrophytic vegeta	-	Yes X						
Hydric soil present?	•	Yes X	No	Is the sample	d area			
Wetland hydrology	present?	Yes X	No	within a wetla	and?	Yes >	<u> </u>	No
HYDROLOGY								
Wetland Hydrolog	y Indicators:				Se	condary Indic	ators (minir	num of two required)
Primary Indicators (-	required; ch	neck all that	apply)		=	oil Cracks (B	
Surface Water (A		•		auna (B13)	_			oncave Surface (B8)
X High Water Tabl	•	_		osits (B15) (LRR l	J)		Patterns (B1	
X Saturation (A3)	· (· ·=)	_		Sulfide Odor (C1)	_		Lines (B16)	•
Water Marks (B1	1)	_					n Water Tab	
Sediment Depos			Roots (C3	Rhizospheres on Li [.] 3)	ving _		urrows (C8)	
Drift Deposits (B		_		of Reduced Iron (C	4)			erial Imagery (C9)
Algal Mat or Cru	•	_				X Geomorph		
Iron Deposits (B			Soils (C6)	on Reduction in Tille	ea <u> </u>		quitard (D3)	,
	e on Aerial Imagery	(B7)		k Surface (C7)	-	X FAC-Neutr		
Water-Stained L	eaves (B9)	· · · <u>-</u>		plain in Remarks)	_	Sphagnum	moss (D8)	(LRR T, U)
Field Observations				, ,	<u> </u>	<u> </u>		
Field Observations Surface water present		No	Y Den	th (inches)		Watland	hydrology	nresent?
Water table present	_	X No		th (inches)	-	Wetland	nyurology	present:
Saturation present?	_	X No		th (inches)	-	Yes X	No	•
(includes capillary fi	_			ar (inches)	-	103 <u>X</u>	_ '''	·
Describe recorded		n monitoring	a well periol	photos previous i	nepections)	if available:		
Describe recorded (data (Siream gaug	e, moritoring	y well, aeriai	priotos, previous i	пареспона),	ii available.		
Remarks:								
			wate	r in 12" core ho	ole			

Sampling Point:

Plot 15

	Matrix	-		nent the ir dox Feature		or conn	rm the absence of ind	ilcators.)	
Depth (Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0 - 1	10YR 3/2	100			1		silty clay loam		
1 - 8	10YR 3/2	86	10YR 4/6	2	С	М	silty clay loam		
1-0	10YR 6/2	10	10YR 3/6	2	С	M	Silty Clay Ioaili		
0 40					С		ailte alau laam		
8 - 12	10YR 6/2	98	10YR 5/8	2	C	M	silty clay loam		
¹ Type: C = (Concentration, D = D	Depletion, RM	1 = Reduced Matrix,	MS = Mas	ked Sand	l Grains	. ² Location: PL = P	ore Lining, M = Matrix	
Hydric Soil	Indicators:		Polyvalue Belov	w Surface	(S8)		Indicators for Probler	natic Hydric Soils ³ :	
Histisol	(A1)		(LRR S, T, U)		,	_	1 cm Muck (A10) (LRR O)	
Histic E	pipedon (A2)		Thin Dark Surfa	ace (S9) (L	RR S, T,	U)	2 cm Muck (A10) (LRR S)	
Black H	listic (A3)	•	Loamy Mucky N	Mineral (F1) (LRR 0))	Reduced Vertic (F	18)	
Hydrog	en Sulfide (A4)	•	Loamy Gleyed	Matrix (F2)			(outside MLRA 15	,	
Stratifie	ed Layers (A5)	•	X Depleted Matrix	x (F3)		-	—— Piedmont Floodpla	in Soils (F19)	
Organio	Bodies (A6) (LRR F	P, T, U)	Redox Dark Su	ırface (F6)			(LRR P, S, T)	(- /	
5 cm M	ucky Mineral (A7) (L	RR P, T, U)	Depleted Dark	Surface (F	7)	-	Anomalous Bright	Loamy Soils (F20)	
Muck P	resence (A8) (LRR I	Redox Depress	sions (F8)			(MLRA 153B)	9 , , ,		
			Marl (F10) (LR l	R U)		Red Parent Material (TF12)			
Depleted Below Dark Surface (A11)			Depleted Ochri	c (F11) (M I	LRA 151)	Very Shallow Dark	Surface (TF12)		
Thick D	Thick Dark Surface (A11) Thick Dark Surface (A12)			e Masses (F12)	Other (explain in re	emarks)		
— Coast F	Prairie Redox (A16)		(LRR O, P, T)		/				
(MLRA	, ,	•	Umbric Surface	e (F13) (LR	R P, T, U)			
Sandy I	Mucky Mineral (S1)	•	Delta Ochric (F	17) (MLRA	151)		_		
(LRR O		•	Reduced Vertic		-	, 150E	³ Indicators of hydro		
	Gleyed Matrix (S4)	•					and weltand hydrol (9A) present, unless dis	logy must be	
	Redox (S5)	•	—— Anomalous Brig				problematic	turbed of	
	d Matrix (S6)		(MLRA 149A, 1			,	•		
	urface (S7) (LRR P,	S, T, U)	<u> </u>	,	,				
Restrictive	Layer (if observed):							
Туре:									
Depth (inch	es):			Hydric so	il presen	it?	Yes X	No	
Remarks:				<u> </u>					
Nemaiks.									

Project/Site	Moro Creek N	City/	County:	/: Bunn S			Sampling Date: 2018/09/11			
Applicant/Owner:	Arkansas	Arkansas Department of Transportation			n State:	AR S		ampling Po	int:	Plot 16
Investigator(s):	Kayt	i Ewing, Jo	e Led	dvina	Section, Township, Range: T8S R14W					S24
Landform (hillslope	, terrace, etc.):		n	one	Local relie	f (concave,	convex, r	10ne):	no	one
Slope (%): 0	Lat:				Long:		D	atum:	WG	S84
Soil Map Unit Name	e	Weha	adkee	silt loam		NWI Cla	assification	า:	PFO1	I A
Are climatic/hydrolo	gic conditions	of the site ty	ypical	for this time of	of the year? Yes	X No_		(If no, ex	xplain in ren	narks)
Are vegetation							Are "norm	al circums	tances" pre	sent?
Are vegetation	, soil	, or h	ıydrolo	ogynat	urally problemat			es X		
							-	-	-	in Remarks.)
SUMMARY OF FI		ach site m	ap sh	nowing sam	oling point loca	ations, tra	nsects, i	mportant	features, e	etc.
Hydrophytic vegeta		Yes_	<u> X</u>	No						
Hydric soil present?		Yes_	<u> X</u>	_ No	Is the sample					
Wetland hydrology	present?	Yes_	Х	No	within a wetla	nd?	Yes_	<u> </u>	No	
Remarks: (Explain	alternative proc	edures her	e or in	i a separate re	eport.)					
HYDROLOGY										
Wetland Hydrolog	y Indicators:					Se	econdary	Indicators ((minimum o	f two required)
Primary Indicators ((minimum of on	e is require	d; che	eck all that ap	ply)	<u>-</u>	Surfac	ce Soil Crac	ks (B6)	
Surface Water (A	A1)		_	_Aquatic Fau	na (B13)	<u>-</u>	Spars	ely Vegetat	ed Concave	Surface (B8)
X High Water Tab	ie (A2)			Marl Depos	its (B15) (LRR U)	Draina	age Patterns	s (B10)	
X Saturation (A3)				_ Hydrogen Su	ulfide Odor (C1)	_	Moss	Trim Lines	(B16)	
Water Marks (B	1)			Oxidized Rh	izospheres on Liv	ing -	Dry-S	eason Wate	er Table (C2)
Sediment Depos	sits (B2)			Roots (C3)	оро.оо о	9	Crayfi	sh Burrows	(C8)	
Drift Deposits (B	33)			Presence of	Reduced Iron (C	4)	Satura	ation Visible	on Aerial In	nagery (C9)
Algal Mat or Cru	ıst (B4)			Recent Iron	Reduction in Tille	d -	X Geom	orphic Posi	tion (D2)	
Iron Deposits (B	5)		_	Soils (C6)			Shallo	w Aquitard	(D3)	
Inundation Visib	le on Aerial Ima	gery (B7)		Thin Muck S	urface (C7)	_	X FAC-N	Neutral Test	t (D5)	
Water-Stained L	.eaves (B9)			Other (Expla	in in Remarks)	_	Sphag	ınum moss	(D8) (LRR 1	Γ, U)
Field Observation	 s:						<u></u>			
Surface water pres			No	X Depth	(inches)		Wet	land hydro	ology prese	ent?
Water table presen			No		(inches)	-				
Saturation present?			No		(inches)	-	Yes	X	No	
(includes capillary f					()	-	_			
Describe recorded		auge monit	oring	well, aerial ph	notos previous ir	nspections)	if availab	le:		
	aata (on oann go		······································	, aoa. p	, р	,	,			
Remarks:				wotori	n 12" core ho					
				wateri	n 12 core no	ie				

Sampling Point:

Plot 16

Depth	cription: (Describ Matrix	•		ox Feature		i confl	irm the absence of ind	iicalUIS.)	
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0 - 2	10YR 4/2	98	10YR 4/6	2	C	PL	silty clay loam	Fe/Mn concretions	
2 - 8	10YR 4/2	96	10YR 5/8	2	С	М	silty clay loam		
	101111 112		7.5YR 4/6	2	С	M	only only rount		
8 - 12	10YR 5/2	98	10YR 5/8	2	С	М	P/ ▼ clay		
0 - 12	1011 3/2	30	1011 5/6		C	IVI	Clay		
1							2		
• •		Depletion, RM	1 = Reduced Matrix,	MS = Mask	ed Sand	Grains		ore Lining, M = Matrix	
-	Indicators:		Polyvalue Belov	v Surface (S8)		Indicators for Probler	-	
Histisol			(LRR S, T, U)				1 cm Muck (A10) (•	
	pipedon (A2)		Thin Dark Surfa			-	2 cm Muck (A10) (LRR S)	
	listic (A3)		Loamy Mucky M		(LRR O))	Reduced Vertic (F	•	
— · ·	en Sulfide (A4)		Loamy Gleyed N	` '			(outside MLRA 15	60A, B)	
—	ed Layers (A5)		X Depleted Matrix	` '			Piedmont Floodpla	in Soils (F19)	
	Bodies (A6) (LRR	-	Redox Dark Sur	` '			(LRR P, S, T)		
	ucky Mineral (A7) (L	-	Depleted Dark S	,)		Anomalous Bright	Loamy Soils (F20)	
	resence (A8) (LRR	Redox Depress	, ,			<u> </u>	_ (MLRA 153B)		
<u> </u>			Marl (F10) (LRF	-		Red Parent Materia	,		
			Depleted Ochric	(F11) (ML	.RA 151)	Very Shallow Dark	·		
Thick D	ark Surface (A12)		Iron-Manganese	e Masses (I	- 12)		Other (explain in re	emarks)	
	Prairie Redox (A16)		(LRR O, P, T)						
(MLRA	150A)		Umbric Surface)			
_	Mucky Mineral (S1)		Delta Ochric (F				³ Indicators of hydro	onhytic vegetation	
LRR C	• •		Reduced Vertic	. , .			and weltand hydrol		
	Gleyed Matrix (S4)		Piedmont Flood	plain Soils	(F19) (M	LRA 14	probont, amobb aid	turbed or	
	Redox (S5)		Anomalous Brig))	problematic		
	d Matrix (S6)		(MLRA 149A, 1	53C, 153D)				
Dark S	urface (S7) (LRR P,	S, T, U)							
Restrictive	Layer (if observed	n:							
Type:	_uyo. (oboo. roa	· <i>y</i> ·							
	es):			Hydric soi	l presen	t?	Yes X	No	
1 (,			•					
Remarks:									

Project/Site	Moro Creek N	litigation Ba	nk	City/	County:	Bunn	Sa	ampling Date	2018/09/11
Applicant/Owner:	Arkansas	Department	of Tran	 sportatio	n State:	AR	Sa	mpling Point	:: Plot 17
Investigator(s):	Kayt	i Ewing, Joe	Ledvin	а	Section,	S R14W S24			
Landform (hillslope	, terrace, etc.):		none)	Local relie	Local relief (concave, convex, none):			
Slope (%): 0	Lat:				Long:		Da	atum:	WGS84
Soil Map Unit Name	e	Wehad	lkee silt	loam		NWI Clas	ssification):	PFO1A
Are climatic/hydrolo	gic conditions	of the site typ	ical for t	his time c	of the year? Yes	X No		(If no, expl	ain in remarks)
Are vegetation	, soil	, or hy	drology_	sig	nificantly disturb	ed? A	Are "norm	al circumstar	nces" present?
Are vegetation	, soil	, or hy	drology_	nat	urally problema	tic?	Ye	sX	No
						(1	If needed	, explain any	answers in Remarks.)
SUMMARY OF FI		ach site ma	p show	ing sam	pling point loc	ations, tran	sects, ir	nportant fe	atures, etc.
Hydrophytic vegeta	-			10					
Hydric soil present?		Yes	<u>X</u> N	10	Is the sample				
Wetland hydrology	present?	Yes	<u>X</u> N	10	within a wetla	and?	Yes_	Х	No
Remarks: (Explain	alternative prod	edures here	or in a s	eparate re	eport.)				
HYDROLOGY									
Wetland Hydrolog	_					Se	condary I	ndicators (m	inimum of two required)
Primary Indicators ((minimum of on	e is required;	; check a	all that ap	ply)	_	Surfac	e Soil Cracks	(B6)
Surface Water (A1)		Aq	ıuatic Fauı	na (B13)	_	Sparse	ely Vegetated	Concave Surface (B8)
High Water Tab	e (A2)		Ma	arl Depos	its (B15) (LRR l	J)	Draina	ge Patterns (B10)
Saturation (A3)			Ну	drogen Su	ulfide Odor (C1)	_	Moss ⁻	Trim Lines (B	16)
Water Marks (B	1)		Ох	didized Rh	izospheres on Li	ving _	Dry-Se	eason Water	Γable (C2)
Sediment Depos	sits (B2)		Ro	oots (C3)		_	Crayfis	sh Burrows (C	8)
Drift Deposits (B	33)		Pr	esence of	Reduced Iron (C	- (4)	Satura	tion Visible or	n Aerial Imagery (C9)
Algal Mat or Cru	ıst (B4)		Re	ecent Iron	Reduction in Tille	ed	X Geom	orphic Positio	n (D2)
Iron Deposits (B	5)		So	oils (C6)		_	Shallo	w Aquitard (D	3)
Inundation Visib	le on Aerial Ima	gery (B7)	Th	in Muck S	Surface (C7)		_	leutral Test (E	•
Water-Stained L	eaves (B9)		Ot	her (Expla	in in Remarks)	_	Sphag	num moss (D	8) (LRR T, U)
Field Observation	s:								
Surface water pres			No)	(Depth	(inches)		Wetl	and hydrolo	gy present?
Water table presen	t? Yes		No 🕽	C Depth	(inches)				
Saturation present?	Yes		No >	C Depth	(inches)	_	Yes	X	No
(includes capillary f	ringe)		\ <u></u>	<u> </u>					
Describe recorded	data (stream ga	auge, monitor	ring well,	, aerial ph	notos, previous i	nspections),	if availabl	e:	
Remarks:									

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 17 **Dominance Test Worksheet** Absolute Dominant Indicator % Cover Tree Stratum (Plot size: 30-m radius) Species Staus **Number of Dominant Species** that are OBL. FACW. or FAC: (A)

				that are OBE, I NOW, OF I NO(N)
2				Total Number of Dominant Species Across all Strata: 2 (B)
4				
5				Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)
6				(702)
7				Prevalence Index Worksheet
8				Total % Cover of:
		= Total Cove		OBL species 0 x 1 = 0
50% of total cover:	20%	of total cover		FACW species 75 x 2 = 150
Sapling/Shrub Stratun (Plot size: 15-m radius)				FAC species 15 x 3 = 45
1 Liquidambar styraciflua	4	N	FAC	FACU species 5 x 4 = 20
2				UPL species 0 x 5 = 0
3				Column totals 95 (A) 215 (B)
4				Prevalence Index = B/A = 2.26
5				Hydrophytic Vegetation Indicators:
<u> </u>				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
0		. ——		X 3 - Prevalence index is ≤3.0*
<u> </u>	4	= Total Cove		
50% of total cover: 2	-	of total cover		4 - Morphogical adaptations* (provide
Herb Stratum (Plot size: 1m ²)		or total cover	. 0.0	supporting data in Remarks or on a separate sheet)
	40	v	FACW	Problematic hydrophytic vegetation*
1 Boehmeria cylindrica	40 15	- <u>Y</u>	FACW	(explain)
2 Panicum verrucosum				— (explain)
3 Mikania scandens	10	N	FACW	*Indicators of hydric soil and wetland hydrology must be
4 Phaseolus sp.	<u>8</u> 6	N	FACIA/	present, unless disturbed or problematic
5 Pluchea camphorata		- ——	FACW	Definitions of Four Vegetation Strata:
6 Eupatorium capillifolium	5	N	FACU	- W
7 Rhexia mariana	4	<u> </u>	FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8				or more in diameter at breast height (DBH), regardless of height.
9				
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall
12				
<u>-</u>	88	= Total Cove		Herb – All herbaceous (non-woody) plants,
50% of total cover: 44	20%	of total cover	17.6	regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius)				ft tall
1 Smilax rotundifolia	10	Y	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Smilax bona-nox	11	<u> </u>	FAC	in height.
3				
4				
5				
6				Hydrophytic
<u>-</u>	11	_= Total Cove		vegetation
50% of total cover: 5.5	20%	of total cover	2.2	present? Yes X No
Remarks: (Include photo numbers here or on a separate	e sheet)			

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r conf	irm the absence of ind	icators.)			
Depth	Matrix		Redo	ox Feature	s						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 2	10YR 4/2	98	10YR 5/8	2	С	М	silty clay loam				
2 - 8	10YR 4/2	49	7.5YR 4/6	2	С	PL	silty clay loam				
	10YR 5/2	49									
8 - 12	10YR 5/2	96	10YR 5/8	2	С	М	loamy clay				
			10YR 3/6	2	С	М					
¹ Type: C = 0	Concentration. D = D	epletion, RM	I = Reduced Matrix, I	⊔ MS = Masl	ked Sand	Grains	s. ² Location: PL = Po	ore Lining, M = Matrix			
	Indicators:	,	Polyvalue Below				Indicators for Problen				
Histisol			(LRR S, T, U)	Surface (30)		1 cm Muck (A10) (I	-			
_	pipedon (A2)	-	Thin Dark Surfac	ce (S9) (LF	RR S. T. U	J)	2 cm Muck (A10) (I	-			
_	istic (A3)	-	 Loamy Mucky M			-	Reduced Vertic (F1	·			
	en Sulfide (A4)	-	Loamy Gleyed M				(outside MLRA 15	•			
Stratifie	d Layers (A5)	•	X Depleted Matrix	(F3)			Piedmont Floodplai	in Soils (F19)			
Organic	Bodies (A6) (LRR P	P, T, U)	Redox Dark Surf	face (F6)			(LRR P, S, T)	in Cone (i 10)			
5 cm Mi	ucky Mineral (A7) (L l	RR P, T, U)	Depleted Dark S	Surface (F7	·)		Anomalous Bright L	₋oamv Soils (F20)			
Muck Presence (A8) (LRR U) Redox De				ons (F8)			(MLRA 153B) o	, (-,			
1 cm Muck (A9) (LRR P. T) Marl (F10				(U)			Red Parent Materia	al (TF12)			
X Depleted Below Dark Surface (A11) Depleted Oc				(F11) (ML	RA 151)		Very Shallow Dark	Surface (TF12)			
Thick D	ark Surface (A12)	-	Iron-Manganese	Masses (I	F12)		Other (explain in re	marks)			
Coast P	rairie Redox (A16)	-	(LRR O, P, T)								
(MLRA	150A)	-	Umbric Surface	nbric Surface (F13) (LRR P, T, U)							
Sandy N	Mucky Mineral (S1)	-	Delta Ochric (F1	7) (MLRA	151)	3 Indicators of budge	³ Indicators of hydrophytic vegetation				
(LRR O	, S)	·-	Reduced Vertic (and weltand hydrology must be A) present, unless disturbed or				
	Gleyed Matrix (S4)	-	Piedmont Floodp	olain Soils	(F19) (M I	_RA 14					
	Redox (S5)		Anomalous Brigh	-)	problematic				
	d Matrix (S6)	-	(MLRA 149A, 15	53C, 153D)						
Dark Su	ırface (S7) (LRR P, S	S, T, U)									
Restrictive	Layer (if observed)):									
Туре:	,										
Depth (inch	es):			Hydric soi	il present	t?	Yes X	No			
							·	<u></u>			
Remarks:											

Project/Site	Moro Creek Mitig	ation Bank	City/	County:	Bunn	Sampling	Date: 2018/09	9/11		
Applicant/Owner:	Arkansas Dep	artment of T	ransportatio	n State:	AR	Sampling I	Point: Plot 1	18		
Investigator(s):	Kayti Ew	ring, Joe Led	vina	Section, T	ownship, Rang	je:	T8S R14W S24			
Landform (hillslope	, terrace, etc.):	n	one	Local relief	(concave, conv	/ex, none):	none			
Slope (%): 0	Lat:			Long:		Datum:	WGS84			
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Classific	cation:	PFO1A			
Are climatic/hydrolo	ogic conditions of th	e site typical f	for this time o	of the year? Yes _	X No	(If no,	explain in remarks)			
Are vegetation	, soil	, or hydrolo	ogysigr	nificantly disturbed	d? Are "	normal circun	nstances" present?			
Are vegetation	, soil	, or hydrolo	ogynat	urally problematio		Yes X				
					•	-	any answers in Re	marks.)		
	NDINGS - Attach		owing samp	oling point locat	tions, transec	ts, importar	nt features, etc.			
Hydrophytic vegeta	*	Yes X	No							
Hydric soil present?		Yes X	No	Is the sampled						
Wetland hydrology	present?	Yes X	No	within a wetlan	id? Y	es X	No	_		
Remarks: (Explain	alternative procedu	res here or in	a separate re	eport.)						
HYDROLOGY										
Wetland Hydrolog	y Indicators:				Second	dary Indicator	s (minimum of two r	equired)		
Primary Indicators ((minimum of one is	required; che	ck all that app	ply)	s	Surface Soil Cr	acks (B6)			
Surface Water (A1)		_Aquatic Faur	na (B13)	s	Sparsely Veget	tated Concave Surfac	ce (B8)		
High Water Table (A2)			- Marl Deposi	its (B15) (LRR U)		Orainage Patte	rns (B10)			
Saturation (A3)			- Hydrogen Sı	ulfide Odor (C1)		Moss Trim Line	es (B16)			
Water Marks (B1)			 Oxidized Rhi 	izospheres on Livir	ng)ry-Season Wa	ater Table (C2)			
Sediment Depos			Roots (C3)	izospileres on Livii	·9 —	crayfish Burrov				
Drift Deposits (B	33)		_	Reduced Iron (C4)	<u> </u>	Saturation Visil	ble on Aerial Imagery	' (C9)		
Algal Mat or Cru	ıst (B4)		Recent Iron	Reduction in Tilled	X	Geomorphic Po	osition (D2)			
Iron Deposits (B	35)		Soils (C6)	rteduction in Tilled		Shallow Aquita	rd (D3)			
Inundation Visib	le on Aerial Imagery	(B7)	Thin Muck S	urface (C7)		X FAC-Neutral Test (D5)				
Water-Stained L	eaves (B9)		Other (Expla	in in Remarks)	— _s	Sphagnum moss (D8) (LRR T, U)				
Field Observation	e.									
Surface water prese		No	X Depth	(inches)		Wetland hyd	drology present?			
Water table present		No	X Depth	· · · · · · · · · · · · · · · · · · ·		Trottana ny	nology processes			
Saturation present?	_	No	X Depth	· · · · · · · · · · · · · · · · · · ·	Yes	s X	No			
(includes capillary f				()						
	data (stream gauge	. monitorina v	well, aerial ph	otos, previous ins	pections), if av	ailable:				
	aata (et eam gaage	,	,, a.o., a.		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
Remarks:										

Sampling Point:

Plot 18

0 - 2	Profile Des	cription: (Describe	to the dept	h needed to docum	ent the inc	dicator o	r confi	rm the absence of ind	icators.)		
(Inches)	Depth	Matrix		Redo	ox Features	S					
2 - 12	(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains.	0 - 2	10YR 4/2	98	10YR 3/6	2	С	М	silty clay loam			
Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix Indicators for Problematic Hydric Soils*: Histisol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Som Mucky Mineral (A7) (LRR P, T, U) Depleted Bolow Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Anomalous Bright Loamy Soils (F20) (MLRA 150A, B) Derived Matrix (S6) Dark Surface (S9) (LRR P, T, U) Depleted Dark Surface (F1) Mark (F10) (LRR D) Defleta Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Soly Bediance (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No	2 - 12	10YR 4/2	78	10YR 3/6	2	С	PL	sandy clay loam	silty clay loam		
Hydric Soil Indicators: Histisol (A1) Histisol (A2) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A3) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Hedued Vertic (F18)		10YR 5/2	20								
Hydric Soil Indicators: Histisol (A1) Histisol (A2) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A3) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Hedued Vertic (F18)											
Hydric Soil Indicators: Histisol (A1) Histisol (A2) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A3) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Hi											
Hydric Soil Indicators: Histisol (A1) Histisol (A2) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A3) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Hi											
Hydric Soil Indicators: Histisol (A1) Histisol (A2) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A3) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Hi											
Hydric Soil Indicators: Histisol (A1) Histisol (A2) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A3) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Hi											
Hydric Soil Indicators: Histisol (A1) Histisol (A2) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A3) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Hi											
Hydric Soil Indicators: Histisol (A1) Histisol (A2) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A3) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Histisol (A3) Histisol (A1) Hi	¹ Type: C = (Concentration, D = D	epletion, RM	I = Reduced Matrix,	⊔ MS = Mask	ed Sand	Grains	. ² Location: PL = P	□ ore Lining, M = Matrix		
Histisol (A1) (LRR S, T, U) 1 cm Muck (A10) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, B) Stratified Layers (A5) X Depleted Matrix (F2) (LRR P, S, T) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) (LRR P, S, T) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (TF12) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR P, T, U) Sandy Mucky Mineral (S1) (LRR P, T) Umbric Surface (F13) (LRR P, T, U) Sandy Mucky Mineral (S1) (LRR P, T) Detato Ochric (F13) (MLRA 1510) Teledochric (F13) (MLRA 150A) Sandy Gleyed Matrix (S4) Piedmont Floodplain Soils (F20) (MLRA 150A) Sandy Redox (S5) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (If observed): Type: Depth (inches): Hydric soil present? Yes X No			· · ·								
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F6) Muck Presence (A8) (LRR U) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Sandy Redox (S5) Dark Surface (S7) (LRR P, S, T, U) Type: Depth (inches): Thin Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O) Redox Derive Matrix (F2) Reduced Vertic (F18) (outside MLRA 150A, B) Reduced Vertic (F18) (LRR P, S, T) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Other (explain in remarks) Very Shallow Dark Surface (TF12) Other (explain in remarks) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 150) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Anomalous Bright Loamy Soils (F20) (MLRA 149A), 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No	1 -				V Surface (30)			-		
Black Histic (A3) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Som Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Loamy Gleyed Matrix (F2) Mouth Green (A8) Loamy Gleyed Matrix (F3) Redox Depressions (F6) Medox Depressions (F8) Marl (F10) (LRR U) Redox Depressions (F8) Marl (F10) (MLRA 151) Very Shallow Dark Surface (TF12) Other (explain in remarks) Other (explain in remarks) Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic Piedmont Floodplain Soils (F19) (MLRA 149A) Sandy Redox (S5) Anomalous Bright Loamy Soils (F20) MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No		` '	-		ce (S9) (LF	RR S, T, L	J) _		•		
Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 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) (LRR Q, S) Sandy Mucky Mineral (S1) (LRR Q, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, T, U) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF12) Very Shallow Dark Surface (TF12) Other (explain in remarks) Other (explain in remarks) **Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic MLRA 149A, 153C, 153D) **Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No **No			-				-		•		
Organic Bodies (A6) (LRR P, T, U) From Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Muck Presence (A8) (LRR U) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF12) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 150L Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No	Hydroge	en Sulfide (A4)	-	 Loamy Gleyed N	Matrix (F2)			•	•		
Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P. T) Depleted Dark Surface (F6) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, T, U) Depleted Dark Surface (F7) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF12) Very Shallow Dark Surface (TF12) Other (explain in remarks) Other (explain in remarks) Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No	Stratifie	d Layers (A5)	-	X Depleted Matrix	(F3)		=	—— Piedmont Floodola	in Soils (F19)		
Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P. T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Redox Depressions (F8) Marl (F10) (LRR U) Redox Depressions (F8) (MLRA 151) Red Parent Material (TF12) Very Shallow Dark Surface (TF12) Other (explain in remarks) (LRR O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E Piedmont Floodplain Soils (F19) (MLRA 149A) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No	Organic	Bodies (A6) (LRR P	P, T, U)	Redox Dark Sur	face (F6)			-	()		
Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P. T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Redox Depressions (F8) Marl (F10) (LRR U) Red Parent Material (TF12) Very Shallow Dark Surface (TF12) Other (explain in remarks) (LRR P, T, U) Delta Ochric (F13) (LRR P, T, U) Reduced Vertic (F18) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E Piedmont Floodplain Soils (F19) (MLRA 149A) Sandy Redox (S5) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No	5 cm Mi	ucky Mineral (A7) (Ll	RR P, T, U)	Depleted Dark S	<u> </u>						
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (TF12) Other (explain in remarks) Indicators of hydrophytic vegetation and weltand hydrology must be Piedmont Floodplain Soils (F19) (MLRA 149A, 150L) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No	Muck P	resence (A8) (LRR L	J)	Redox Depressi	sions (F8) (MLRA 153B)						
Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Iron-Manganese Masses (F12) Other (explain in remarks) Iron-Manganese Masses (F12) Other (explain in remarks) Other (explain in remarks) Iron-Manganese Masses (F12) Other (explain in remarks) Other (explain in remarks)	1 cm Mu	Marl (F10) (LRR	R U)		_	Red Parent Materia	al (TF12)				
Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Clar O, P, T) Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E Piedmont Floodplain Soils (F19) (MLRA 149A) Piedmont Floodplain Soils (F20) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Hydric soil present? Yes X No	Deplete	(F11) (ML	RA 151)	_	Very Shallow Dark	Surface (TF12)					
Umbric Surface (F13) (LRR P, T, U) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E Anomalous Bright Loamy Soils (F19) (MLRA 149A) present, unless disturbed or problematic MLRA 149A, 153C, 153D) Hydric soil present? Yes X No	Thick D	e Masses (F	- 12)	-	Other (explain in re	marks)					
Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150E Piedmont Floodplain Soils (F19) (MLRA 149A) Piedmont Floodplain Soils (F19) (MLRA 149A) Piedmont Floodplain Soils (F20) MLRA 149A, 153C, 153D) Type: Depth (inches): Hydric soil present? Yes X No	Coast P	rairie Redox (A16)	-								
(LRR O, S) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Reduced Vertic (F18) (MLRA 150A, 150E Piedmont Floodplain Soils (F19) (MLRA 149A) Piedmont Floodplain Soils (F20) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No	(MLRA	150A)	-)				
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Reduced Vertic (F18) (MLRA 130A, 130F and weltand hydrology must be Piedmont Floodplain Soils (F19) (MLRA 149A) present, unless disturbed or problematic Anomalous Bright Loamy Soils (F20) problematic (MLRA 149A, 153C, 153D) Hydric soil present? Yes X No		• • • • • • • • • • • • • • • • • • • •	-			-		³ Indicators of hydro	onhytic vegetation		
Sandy Redox (S5) Anomalous Bright Loamy Soils (F20) Problematic (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No		-	-					and weltand hydrol	oay must be		
Stripped Matrix (S6)(MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? YesX No		• , ,	-	Piedmont Flood	plain Soils	(F19) (ML	_RA 14	A) present, unless disturbed or			
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No				_	-	•)				
Restrictive Layer (if observed): Type: Depth (inches): Hydric soil present? Yes X No		` '	. T III	(MLRA 149A, 1	53C, 153D	,					
Type: Hydric soil present? Yes X No	Dark Su	irrace (57) (LRR P, 3	5, 1, 0)								
Depth (inches): Hydric soil present? Yes X No	Restrictive	Layer (if observed)):								
	Туре:										
Remarks:	Depth (inche	es):		<u> </u>	Hydric soi	l present	t?	Yes X	No		
	Remarks:			L							
	rtemants.										

Project/Site	Moro Creek Mitiç	gation Bank	Cit	y/County:	Bunn	Sampling D	Date: 2018/09/11		
Applicant/Owner:	Arkansas De	partment of Tra	ansportati	ion State:	AR	Sampling Po	oint: Plot 19		
Investigator(s):	Kayti E	wing, Joe Ledvi	ina	Section	n, Township, R	lange:	T8S R14W S24		
Landform (hillslope	e, terrace, etc.):	no	ne	Local re	lief (concave, c	convex, none):	none		
Slope (%):0	Lat:			Long:		Datum:	WGS84		
Soil Map Unit Nam	ie	Wehadkee s	ilt loam		NWI Clas	sification:	PFO1A		
Are climatic/hydrological	=					(If no, e	explain in remarks)		
Are vegetation		, or hydrolog		-		re "normal circums	·		
Are vegetation	, soil	, or hydrolog	yna	aturally problem		Yes X			
			_				any answers in Remarks.)		
	INDINGS - Attach			npling point to	cations, trans	sects, important	: features, etc.		
Hydrophytic vegeta	-	Yes X	No	4					
Hydric soil present		Yes	No X	Is the samp		W	M. W		
Wetland hydrology		Yes	No X	within a wet	tland?	Yes	NoX		
Remarks: (Explain	alternative procedu	ures here or in a	ı separate	report.)					
HYDROLOGY									
Wetland Hydrolog	gy Indicators:				Sec	condary Indicators	(minimum of two required)		
_	(minimum of one is	s required; chec	k all that a	ipply)	-	Surface Soil Cra			
Surface Water (•	Aquatic Fa		_		ated Concave Surface (B8)		
	 _ `			osits (B15) (LRR	— ≀ U)	Drainage Patterr			
Saturation (A3)				Sulfide Odor (C1)		Moss Trim Lines			
Water Marks (B						Dry-Season Wat			
Sediment Depo	,		Oxidized R Roots (C3)	Rhizospheres on I)	Living	Crayfish Burrows	·		
Drift Deposits (E				, of Reduced Iron ((C4)		e on Aerial Imagery (C9)		
Algal Mat or Cru	•					✓ Geomorphic Pos			
Iron Deposits (E			Trecent non reduction in timed			Shallow Aquitard			
	ble on Aerial Imagery		` '	Surface (C7)	_	FAC-Neutral Test (D5)			
Water-Stained L		· · · · —		olain in Remarks)			s (D8) (LRR T, U)		
						_			
Field Observation Surface water pres		No	Y Dent	h (inches)		Watland hydr	ology present?		
Water table presen	_	No _		:h (inches) :h (inches)	-	Welland nyur	ology present:		
Saturation present	_	No _		th (inches) th (inches)	-	Yes	No X		
(includes capillary t	_		Dopu	11 (11101103)	-		NO X		
	data (stream gaug	e monitoring w	ell aerial r	nhotos previous	inspections), i	f available:			
D0001100 10001422	data (on cam gang	o, monitoring	JII, GOTIGI P	7110100, provides	, mopodiano _j ,	r avanabic.			
Remarks:	-								
				,	,				

VEGETATION -- Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	
1 Carpinus caroliniana	1	N	FAC	Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)
2	<u> </u>		170	
3				Total Number of Dominant Species Across all Strata: 7 (B)
4				
<u>-</u>				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 71.43% (A/B)
6				
				Prevalence Index Worksheet
8				Total % Cover of:
		Total Cove		OBL species 25 x 1 = 25
	.5 20% c	of total cover	0.2	FACW species x 2 =90
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species14 x 3 =42
1 Carpinus caroliniana	5	<u> </u>	FAC	FACU species 60 x 4 = 240
2 Liquidambar styraciflua	3	Υ	FAC	UPL species 0 _ x 5 = 0
3				Column totals 144 (A) 397 (B)
4				Prevalence Index = B/A = 2.76
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				X 3 - Prevalence index is ≤3.0*
	8 :	Total Cove	r	
50% of total cover:		of total cover		4 - Morphogical adaptations* (provide supporting data in Remarks or on a
Herb Stratum (Plot size: 1m ²)			separate sheet)
1 Coleataenia rigidula	45	Υ	FACW	Problematic hydrophytic vegetation*
2 Eupatorium capillifolium	30	<u> </u>	FACU	(explain)
3 Callicarpa americana	30	<u>'</u>	FACU	
	25	N	OBL	*Indicators of hydric soil and wetland hydrology must be
4 Gratiola neglecta 5 Cyperus sp.	10	N	OBL	present, unless disturbed or problematic
				Definitions of Four Vegetation Strata:
6				Tree Monday plants evaluating vines 2 in (7.6 cm)
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),
8				regardless of height.
9				
10				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or
11				equal to 3.28 ft (1 m) tall
12				, ,
		Total Cove		Herb – All herbaceous (non-woody) plants,
	20 % c	of total cover	28	regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius)			ft tall
1 Vitis rotundifolia	4	Υ	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Smilax rotundifolia	1	<u> </u>	FAC	in height.
3				
4				
5				
6				Hydrophytic
	5	Total Cove	r	vegetation
50% of total cover: 2	. 5 20% c	of total cover	: 1	present? Yes X No
_				
Remarks: (Include photo numbers here or on a sepa	rate sheet)			•
·	•			

Sampling Point: Plot 19

Profile Des	cription: (Describe	to the depth	needed to docum	nent the in	dicator o	r confi	rm the absence of ind	icators.)		
Depth	Matrix		Red	ox Feature	s					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 1	10YR 4/3	100					silty clay loam			
1 - 12	10YR 4/2	50					sandy clay loam	silty clay loam		
	10YR 5/2	50								
¹ Type: C = (Concentration, D = D	enletion RM	= Reduced Matrix	MS = Mas	ked Sand	Graine	² Location: PL = Pa	ore Lining, M = Matrix		
	Indicators:	repietion, rtivi					Indicators for Problem			
Histisol			Polyvalue Belov (LRR S, T, U)	v Surface (S8)		1 cm Muck (A10) (I	-		
	pipedon (A2)	_	Thin Dark Surfa	ce (S0) (L	реті		2 cm Muck (A10) (I	-		
	istic (A3)	_	Loamy Mucky M			-		-		
	en Sulfide (A4)	_	Loamy Gleyed N	, ,	(LIXIX O)		Reduced Vertic (F1 (outside MLRA 15			
	d Layers (A5)	_	Depleted Matrix			-				
	Bodies (A6) (LRR P	- т п	Redox Dark Sur	` '			Piedmont Floodplai (LRR P, S, T)	in Solls (F19)		
	ucky Mineral (A7) (L l	_	Depleted Dark S		')	-	Anomalous Bright Loamy Soils (F20)			
_	resence (A8) (LRR L	· -	Redox Depressi	•	,		(MLRA 153B)	Loanly Soils (F20)		
	Marl (F10) (LRF	` '		-	Red Parent Materia	al (TF12)				
1 cm Muck (A9) (LRR P. T) Marl (F10) (LF Depleted Below Dark Surface (A11) Depleted Och				•	RA 151)	-	Very Shallow Dark			
This David Courter at (A40)					-	-	Other (explain in re			
			Iron-Manganese (LRR O, P, T)	e iviasses (r 12)	-		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
(MLRA	rairie Redox (A16) 150A)	_	Umbric Surface	(F13) (LRI	R P. T. U))				
	, Mucky Mineral (S1)	_	— Delta Ochric (F1							
(LRR O		_	Reduced Vertic		-	150E	³ Indicators of hydro			
	Gleyed Matrix (S4)	_					and weltand hydrology must be A) present, unless disturbed or problematic			
·	Redox (S5)	-	— Anomalous Brig							
	d Matrix (S6)		(MLRA 149A, 1	-		')	problemate			
Dark Su	ırface (S7) (LRR P, \$	S, T, U)								
			1							
	Layer (if observed)):								
Type:	\.			l leadain an		40	Vaa	No. V		
Depth (inch	es):			Hydric so	ıı presen	τ?	Yes	No <u>X</u>		
Remarks:										

Project/Site	Moro Creek Mit	tigation B	ank	City/	County:	Bunn		ampling Da	ate: 201	18/09/11
Applicant/Owner:	Arkansas D	epartmen	t of T	ransportatio	n State:	AR	Sa	ampling Po	oint: P	lot 20
Investigator(s):	Kayti	Ewing, Jo	e Led	vina	Section,	Township,	Range:		T8S R14W S2	24
Landform (hillslope	, terrace, etc.):		no	one	Local relie	f (concave,	, convex, r	ione):	non	е
Slope (%): 0	Lat:				Long:		D	atum:	WGS	84
Soil Map Unit Name	e	Weha	dkee	silt loam		NWI Cla	assificatior	າ:	PFO1A	
Are climatic/hydrolo	ogic conditions of	the site ty	pical f	for this time o	f the year? Yes	X No		(If no, ex	xplain in rema	rks)
Are vegetation	, soil	, or h	ydrolo	gysigr	nificantly disturbe	ed?	Are "norm	al circumst	tances" prese	nt?
Are vegetation	, soil	, or h	ydrolo	gynati	urally problemat			es <u>X</u>		_
							•	-	iny answers in	•
SUMMARY OF FI		ch site ma		owing samp	oling point loca	itions, tra	nsects, i	nportant 1	features, etc	<u>;. </u>
Hydrophytic vegeta	-	Yes_	X	No						
Hydric soil present?		Yes_	X	No	Is the sample					
Wetland hydrology	present?	Yes_	Х	No	within a wetla	nd?	Yes_	<u> </u>	No	
HYDROLOGY										
Wetland Hydrolog						S	· ·	•	(minimum of t	wo required)
Primary Indicators	(minimum of one	is required	d; che	ck all that app	oly)	-		ce Soil Crac		
X Surface Water (•			_Aquatic Faur		-	Spars	ely Vegetate	ed Concave S	urface (B8)
X High Water Tab	le (A2)			_Marl Deposi	its (B15) (LRR U) _	Draina	age Patterns	s (B10)	
X Saturation (A3)				_Hydrogen Sเ	ulfide Odor (C1)	-	Moss	Trim Lines ((B16)	
Water Marks (B1)					zospheres on Liv	ing .	Dry-Se	eason Wate	er Table (C2)	
Sediment Depos				Roots (C3)		-		sh Burrows		
Drift Deposits (E	-			Presence of	Reduced Iron (C	•			on Aerial Ima	gery (C9)
Algal Mat or Cru	• •				Reduction in Tille	d .		orphic Posit		
Iron Deposits (B	·			Soils (C6)				w Aquitard		
	le on Aerial Image	∍ry (B7)		Thin Muck S				Neutral Test	` '	
Water-Stained L	.eaves (B9)			Other (Expla	in in Remarks)		Sphag	num moss	(D8) (LRR T, I	U)
Field Observation	s:									
Surface water pres	ent? Yes	X	No	Depth	(inches) 3	_	Wetl	and hydro	ology present	t?
Water table presen	t? Yes	X	No	Depth	(inches) 0	_				
Saturation present?	? Yes	X	No	Depth	(inches) 0	_	Yes	X	No	_
(includes capillary f	ringe)									
Describe recorded	data (stream gaւ	ıge, monito	oring v	well, aerial ph	otos, previous ir	spections)	, if availab	le:		
Remarks:										
	water to	o surface	e in c	ore hole a	nd surface w	ater with	in 15-fo	ot radius	i	

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 20 **Dominance Test Worksheet** Absolute Dominant Indicator Tree Stratum (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** that are OBL, FACW, or FAC: **3** (A) **Total Number of Dominant** Species Across all Strata: (B) Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **20** x 1 = 20% of total cover: 50% of total cover: **FACW** species 41 x 2 =82 Sapling/Shrub Stratun (Plot size: 15-m radius) **19** x 3 = FAC species 57 1 Liquidambar styraciflua FACU species 24 FAC x 4 = 2 UPL species x 5 = 0 **86** (A) 3 Column totals **183** (B) Prevalence Index = B/A = 2.13 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation 6 7 Herbaceous: X 2 - Dominance test is >50% X 3 - Prevalence index is ≤3.0* Ludwigia alternifolia OBL = Total Cover 8 4 - Morphogical adaptations* (provide 50% of total cover: 20% of total cover: 1.6 supporting data in Remarks or on a (Plot size: 1m² Herb Stratum separate sheet) Problematic hydrophytic vegetation* 1 Coleataenia rigidula **FACW** (explain) Gratiola neglecta 8 OBL Ludwigia palustris Ν **OBL** *Indicators of hydric soil and wetland hydrology must be Eupatorium capillifolium **FACU** 4 Ν present, unless disturbed or problematic 5 Andropogon virginicus Ν **FAC Definitions of Four Vegetation Strata: FACW** Pluchea camphorata 6 Ν Dichanthelium dichotomum 5 Ν **FAC** Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), Rhynchospora corniculata **OBL** regardless of height. 4 Cyperus cf. odorata 9 Sapling/Shrub - Woody plants, excluding 2 Ν **FACW** 10 Betula nigra vines, less than 3 in. DBH and greater than or Boehmeria cylindrica Ν **FACW** equal to 3.28 ft (1 m) tall **FACW** Cyperus pseudovegetus Herb - All herbaceous (non-woody) plants, 81 = Total Cover regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: 16.2 (Plot size: 15-m radius) Woody Vine Stratum Vitis cinerea Woody Vine – All woody vines greater than 3.28 ft **FAC** Rubus laudatus 3 4 5 Hydrophytic = Total Cover vegetation Yes X No 20% of total cover: present? 50% of total cover: Remarks: (Include photo numbers here or on a separate sheet) forgot to estimate cover of woody vines, but the two species (one FAC and the other NI) could not change the determination.

US Amy Corps of Engineers

Profile Des	cription: (Describe	to the depti	n needed to docum	ent the inc	dicator o	r confi	irm the absence of ind	licators.)		
Depth	Matrix		Redo	ox Features	3					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 12	10YR 5/2	96	10YR 3/6	2	С	PL	silty clay loam			
			10YR 5/6	2	С	PL				
¹ Type: C = 0	l Concentration, D = D	enletion RM	= Reduced Matrix I	MS = Mack	ed Sand	Grains	² Location: PL = P	ore Lining, M = Matrix		
	Indicators:	repletion, raivi				Oranic	Indicators for Probler			
Histisol			Polyvalue Below (LRR S, T, U)	Surface (S	58)		1 cm Muck (A10) (-		
	pipedon (A2)	-	Thin Dark Surface	ce (S9) (I F	RS.T.I	D .	2 cm Muck (A10) (•		
	listic (A3)	-	Loamy Mucky M							
	en Sulfide (A4)	-	Loamy Gleyed M		(=:::: 0)		Reduced Vertic (F ² (outside MLRA 15			
	d Layers (A5)	-	X Depleted Matrix			•				
	: Bodies (A6) (LRR P	P. T. U)	Redox Dark Surf	` '			Piedmont Floodpla (LRR P, S, T)	III 5011S (F 19)		
	ucky Mineral (A7) (L l	-	Depleted Dark S)		 `	Loomy Soile (E20)		
_	resence (A8) (LRR L	_	Redox Depression	7 Homalous Bright Learny Colle						
1 cm M	' Marl (F10) (LRR	` '		•	Red Parent Materia	al (TF12)				
 Deplete	Depleted Ochric	•	RA 151)	•	—— Very Shallow Dark					
Thick D	— ' Iron-Manganese		-	·	Other (explain in re	·				
	Prairie Redox (A16)		(LRR O, P, T)	iviasses (i	12)	•		,		
(MLRA		=	Umbric Surface	(F13) (LRF	R P, T, U))				
	Mucky Mineral (S1)	-	Delta Ochric (F1				_			
(LRR O		-	Reduced Vertic		-	150E	³ Indicators of hydro			
	Gleyed Matrix (S4)	=					and weltand hydrol 19A) present unless dis	and weltand hydrology must be A) present, unless disturbed or problematic		
Sandy I	Redox (S5)	-	Anomalous Brigh							
Strippe	d Matrix (S6)		(MLRA 149A, 1	-		,				
Dark Su	urface (S7) (LRR P, S	s, T, U)								
D t.: . t.	Language (Contraction of the Contraction of the Con		T							
	Layer (if observed)):								
Type: Depth (inch	06).			Hydric soi	l procon	12	Yes X	No		
Deptil (ilicii				riyuric soi	i presen		163 <u>X</u>			
Remarks:										

Project/Site	Moro Creek Mitig	ation Bank	City/	County:	Bunn/Cleve	land	Sampling D	Date: 2018/09/11		
Applicant/Owner:	Arkansas Dep	artment of T	ransportatio	n State:	AR		Sampling Po	oint: Plot 21		
Investigator(s):	Kayti Ew	ving, Joe Led	lvina	Secti	on, Township	p, Range:		T8S R14W S24		
Landform (hillslope	, terrace, etc.):	n	one	Local ı	elief (concav	e, convex,	none):	none		
Slope (%): 0	Lat:			Long:			Datum:	WGS84		
Soil Map Unit Name	e	Wehadkee	silt loam		NWI (Classificatio	on:	PFO1A		
Are climatic/hydrolo	ogic conditions of the	e site typical	for this time of	of the year? \	es X N	o	(If no, e	explain in remarks)		
Are vegetation	, soil	, or hydrolo	ogysig	nificantly dist	urbed?	Are "nor	mal circums	stances" present?		
Are vegetation	, soil	, or hydrolo	ogynat	urally proble	matic?		res X			
						-	-	any answers in Remarks	i.)	
SUMMARY OF FI			owing samp	oling point	ocations, to	ransects,	important	features, etc.		
Hydrophytic vegeta	*	Yes X	No							
Hydric soil present?		Yes X	_ No	Is the sam	-					
Wetland hydrology	present?	Yes X	No	within a w	etland?	Yes_	Х	No		
Remarks: (Explain	, 		·	, ,						
HYDROLOGY										
Wetland Hydrolog	_					Secondary	/ Indicators	(minimum of two require	ed)	
Primary Indicators (minimum of one is	required; che	ck all that ap	ply)		Surfa	ace Soil Cra	cks (B6)		
Surface Water (A1)	_	_Aquatic Faur			Spar	sely Vegeta	ited Concave Surface (B8))	
High Water Table (A2)			_Marl Deposi	its (B15) (LR	R U)		nage Pattern			
Saturation (A3)			_Hydrogen Sı	ulfide Odor (C	1)	Moss	s Trim Lines	; (B16)		
Water Marks (B1)			Oxidized Rh	izospheres or	n Living	Dry-9	Season Wat	ter Table (C2)		
Sediment Depos	sits (B2)	_	Roots (C3)			Cray	fish Burrows	s (C8)		
Drift Deposits (B	(3)	_	Presence of	Reduced Iron	ı (C4)			e on Aerial Imagery (C9)		
Algal Mat or Cru	ıst (B4)		Recent Iron	Reduction in	Tilled	X Geor	morphic Pos	sition (D2)		
Iron Deposits (B	· ·	_	Soils (C6)				low Aquitard			
Inundation Visib	le on Aerial Imagery	(B7)	Thin Muck S	Surface (C7)		X FAC-Neutral Test (D5)				
Water-Stained L	.eaves (B9)	_	Other (Expla	in in Remark	s)	Spha	agnum moss	s (D8) (LRR T, U)		
Field Observation	s:									
Surface water prese	ent? Yes _	No	X Depth	(inches)		We	tland hydr	ology present?		
Water table present	t? Yes	No	X Depth	(inches)						
Saturation present?	? Yes	No	X Depth	(inches)		Yes	X	No		
(includes capillary f	ringe)									
Describe recorded	data (stream gauge	e, monitoring v	well, aerial ph	notos, previou	us inspection	s), if availa	ıble:			
Remarks:										

Sampling Point:

Plot 21

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the inc	dicator o	r confi	rm the absence of inc	dicators.)			
Depth	Matrix		Redo	ox Features	3						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 3	10YR 3/2	98	10YR 4/6	2	С	М	silty clay loam				
3 - 12	10YR 4/2	98	10YR 4/4	2	С	М	silty clay loam				
¹ Type: C = 0	Concentration, D = D	epletion RM	I = Reduced Matrix. I	MS = Mask	ed Sand	Grains	² l ocation: PL = F	Pore Lining, M = Matrix			
	Indicators:						Indicators for Proble				
Histisol			Polyvalue Below (LRR S, T, U)	/ Surface (3	50)		1 cm Muck (A10) (-			
	pipedon (A2)	-	Thin Dark Surfac	ce (S9) (LR	R S, T, U	J) .	2 cm Muck (A10) (·			
	istic (A3)	•	 Loamy Mucky M			•	Reduced Vertic (F				
	en Sulfide (A4)	-	Loamy Gleyed N				(outside MLRA 1				
	d Layers (A5)	•	X Depleted Matrix	-		•	Piedmont Floodpla				
Organic	Bodies (A6) (LRR P	, T, U)	Redox Dark Sur	face (F6)			(LRR P, S, T)	Cone (1 10)			
5 cm Mi	ucky Mineral (A7) (Ll	RR P, T, U)	Depleted Dark S	Surface (F7)	•	Anomalous Bright	Loamy Soils (F20)			
Muck P	resence (A8) (LRR L	J)	Redox Depressi	sions (F8) (MLRA 153B)							
1 cm M	uck (A9) (LRR P. T)	_	Marl (F10) (LRR	(U)		-	Red Parent Materi	al (TF12)			
Deplete	(F11) (ML	RA 151)		Very Shallow Dark	Surface (TF12)						
Thick D	Iron-Manganese	Masses (F	F12)		Other (explain in re	emarks)					
Coast P	rairie Redox (A16)	-	(LRR O, P, T)								
(MLRA	150A)		Umbric Surface	(F13) (LRF	R P, T, U))					
	Mucky Mineral (S1)	-	Delta Ochric (F1	7) (MLRA	151)		³ Indicators of hydr	anhytic vagatation			
(LRR O	•	-	Reduced Vertic				and weltand hydro	and weltand hydrology must be			
	Gleyed Matrix (S4)	-	Piedmont Flood	plain Soils	(F19) (MI	LRA 14		present, unless disturbed or			
	Redox (S5)		Anomalous Brigl	-	•))	problematic	problematic			
	d Matrix (S6)		(MLRA 149A, 1	53C, 153D))						
Dark St	ırface (S7) (LRR P, \$	5, I, U)									
Restrictive	Layer (if observed)	:									
Туре:											
Depth (inch	es):			Hydric soi	l presen	t?	Yes X	No			
Remarks:											
i veriiai ks.											

Project/Site	Moro Creek Mitiga	ation Bank	City/	County:	Bunn	Sampling	Date: 2018/09/13			
Applicant/Owner:	Arkansas Dep	artment of T	ransportatio	n State:	AR	Sampling F	Point: Plot 22			
Investigator(s):	Kayti Ew	ring, Joe Led	lvina	Section, T	Township, Rang	je:	T8S R14W S24			
Landform (hillslope	, terrace, etc.):	n	one	Local relief	(concave, conv	vex, none):	none			
Slope (%): 0	Lat:			Long:		Datum:	WGS84			
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Classific	cation:	PFO1A			
Are climatic/hydrolo	ogic conditions of th	e site typical	for this time o	of the year? Yes	X No	(If no,	explain in remarks)			
Are vegetation	, soil	, or hydrolo	ogysigr	nificantly disturbe	d? Are "	normal circun	nstances" present?			
Are vegetation	, soil	, or hydrolo	ogynat	urally problematio		Yes X				
						-	n any answers in Remarks.)			
SUMMARY OF FI			owing samp	oling point locat	tions, transec	ts, importan	nt features, etc.			
Hydrophytic vegeta	*	Yes X	No							
Hydric soil present?		Yes X	No	Is the sampled						
Wetland hydrology	present?	Yes X	No	within a wetlan	nd? Y	es X	No			
	alternative procedu		·							
HYDROLOGY										
Wetland Hydrolog	· -				Second	dary Indicators	rs (minimum of two required)			
Primary Indicators ((minimum of one is	required; che	ck all that app	ply)		Surface Soil Cr				
Surface Water (•		_Aquatic Faur				tated Concave Surface (B8)			
<u> </u>			_	its (B15) (LRR U)		Orainage Patte				
Saturation (A3)			_Hydrogen Su	ulfide Odor (C1)		Moss Trim Line	es (B16)			
Water Marks (B1)				izospheres on Livir		-	ater Table (C2)			
Sediment Depos			Roots (C3)			Crayfish Burrov				
Drift Deposits (B	•		Presence of	Reduced Iron (C4)			ble on Aerial Imagery (C9)			
Algal Mat or Cru	, ,			Reduction in Tilled		Geomorphic Po				
Iron Deposits (B	•		Soils (C6)			Shallow Aquita				
	le on Aerial Imagery	(B7)	Thin Muck S			X FAC-Neutral Test (D5)				
Water-Stained L	.eaves (B9)		Other (Expla	iin in Remarks)	`	Sphagnum moss (D8) (LRR T, U)				
Field Observations	s:									
Surface water prese	ent? Yes	No	X Depth	(inches)		Wetland hyd	drology present?			
Water table present	t? Yes _	No	X Depth							
Saturation present?	? Yes _	No	X Depth	(inches)	Yes	s <u>X</u>	No			
(includes capillary f	ringe)									
Describe recorded	data (stream gauge	, monitoring v	well, aerial ph	otos, previous ins	spections), if av	ailable:				
Remarks:										
Nemarks.										

Sampling Point:

Plot 22

Profile Des	cription: (Describe	to the dept	h needed to docun	nent the in	dicator o	r confir	m the absence of inc	licators.)			
Depth	Matrix		Red	lox Feature	s						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 1	10YR 4/3	100					silty clay loam				
1 - 6	10YR 5/2	98	10YR 5/6	2	С	PL	silty clay loam				
6 - 12	10YR 5/2	98	10YR 4/6	2	С	PL	silty clay loam				
¹ Type: C = 0	Concentration, D = D	epletion, RM	I = Reduced Matrix,	MS = Masl	ked Sand	Grains.	² Location: PL = P	ore Lining, M = Matrix			
Hydric Soil	Indicators:		Polyvalue Belov	w Surface (S8)	I	ndicators for Proble				
Histisol	(A1)		(LRR S, T, U)	W Odnace (50)		1 cm Muck (A10) (LRR O)			
Histic E	pipedon (A2)	-	Thin Dark Surfa	ace (S9) (LF	RR S, T, I	J) _	2 cm Muck (A10) (LRR S)			
Black H	istic (A3)	-	Loamy Mucky N	Mineral (F1)	(LRR O)	_	Reduced Vertic (F	18)			
Hydroge	en Sulfide (A4)	-	Loamy Gleyed	Matrix (F2)			(outside MLRA 15				
Stratifie	d Layers (A5)	-	X Depleted Matrix	(F3)		_	— Piedmont Floodpla	in Soils (F19)			
Organic	Bodies (A6) (LRR P	, T, U)	Redox Dark Su	rface (F6)		_	(LRR P, S, T)	,			
5 cm Mı	ucky Mineral (A7) (Ll	RR P, T, U)	Depleted Dark	Surface (F7	·)		Anomalous Bright	Loamy Soils (F20)			
Muck Pi	resence (A8) (LRR L	J)	Redox Depress	ions (F8)		_	(MLRA 153B)				
1 cm Mu	uck (A9) (LRR P. T)	-	Marl (F10) (LRF	R U)		_	Red Parent Materi	al (TF12)			
Deplete	c (F11) (ML	RA 151)	_	Very Shallow Dark	Surface (TF12)						
Thick D	e Masses (l	F12)	_	Other (explain in re	emarks)						
Coast P	rairie Redox (A16)	-	(LRR O, P, T)								
(MLRA	150A)	-	Umbric Surface		-)					
	Mucky Mineral (S1)	-	Delta Ochric (F		-		³ Indicators of hydro	onhytic vegetation			
LRR O	-	-	Reduced Vertic	. , .			and weltand hydro	and weltand hydrology must be			
	Gleyed Matrix (S4)	-					h) present, unless disturbed or problematic				
	Redox (S5)		Anomalous Brig))					
	d Matrix (S6)		(MLRA 149A, 1	153C, 153D)						
Dark Su	ırface (S7) (LRR P, \$	S, I, U)									
Restrictive	Layer (if observed)	:									
Туре:											
Depth (inche	es):			Hydric so	il presen	t?	Yes X	No			
Remarks:											
i veriiai ks.											

Project/Site	Moro Creek Mit	igation Bank	Cit	ty/County:	Bunn	Sar	npling Date	e: 2018/09/13		
Applicant/Owner:	Arkansas D	epartment of	Transportat	tion State:	AR	San	npling Poin	nt: Plot 23		
Investigator(s):		Ewing, Joe Le			n, Township, Ra	inge:	T	8S R14W S24		
Landform (hillslope,	terrace, etc.):		none	Local re	lief (concave, co	nvex, no	ne):	none		
Slope (%): 0	Lat:			Long:		Dat	um:	WGS84		
Soil Map Unit Name	;	Wehadke	e silt loam		NWI Class	ification:		PFO1A		
Are climatic/hydrolo	gic conditions of	the site typica	al for this time	e of the year? Ye	es <u>X</u> No		(If no, exp	olain in remarks)		
Are vegetation	, soil	, or hydro	ologys	ignificantly distu	rbed? Are	e "normal	circumsta	inces" present?		
Are vegetation	, soil	, or hydro	ologyn	aturally problem	atic?	Yes	X	No		
					(If	needed,	explain an	y answers in Remarks.)		
SUMMARY OF FI		h site map s	howing sar	mpling point lo	cations, trans	ects, im	portant fe	eatures, etc.		
Hydrophytic vegeta	•	Yes X	No							
Hydric soil present?		Yes X		Is the samp						
Wetland hydrology	present?	Yes X	No	within a we	tland?	Yes	X	No		
HYDROLOGY										
Wetland Hydrology	=				Seco	=	· ·	ninimum of two required)		
Primary Indicators (minimum of one	is required; ch	neck all that a	apply)		_	Soil Cracks			
Surface Water (A	1 1)	_		auna (B13)		_Sparsely	/ Vegetated	d Concave Surface (B8)		
	High Water Table (A2) Marl Deposit					_	e Patterns (
Saturation (A3)		_	Hydrogen	Sulfide Odor (C1		_Moss Tr	im Lines (B	316)		
				Rhizospheres on	Living	_		Table (C2)		
Sediment Depos			X Roots (C3			_	Burrows (0	·		
Drift Deposits (B	•	_	Presence	of Reduced Iron		_		on Aerial Imagery (C9)		
Algal Mat or Cru	,			on Reduction in T	illed X	_	phic Position			
Iron Deposits (B	·	_	Soils (C6)			_	Aquitard (•		
	le on Aerial Image	ry (B7) _		Surface (C7)		FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)				
Water-Stained L	eaves (B9)		Other (Exp	plain in Remarks)		Spnagn	um moss (L)8) (LRR 1, U)		
Field Observations	s :									
Surface water prese	ent? Yes	No	X Dept	th (inches)	_	Wetla	nd hydrolo	ogy present?		
Water table present		No		th (inches)	_					
Saturation present?		No	X Dept	th (inches)	_ `	res	<u> </u>	No		
(includes capillary fi										
Describe recorded of	ata (stream gau	ge, monitoring	յ well, aerial լ	photos, previous	s inspections), if	available	:			
Remarks:										

Dominance Test Worksheet Dominant Species	Tree Stratum	
Carpinus caroliniana	Carpinus caroliniana	
		(\(\)
3 Acer rubrum	Acerubrum	(A)
Percent of Dominant Species that are OBL, FACW, or FAC: 87.50% (A/B)	Percent of Dominant Species that are OBL, FACW, or FAC: 87.503	/D)
The first of total cover	that are OBL, FACW, of FAC: 87.50° for India Cover	— ^(B)
Prevalence Index Worksheet Total % Cover of: Total % Cover of: Total % Cover of: Total % Cover of: OBL species 6	Prevalence Index Worksheet Total % Cover of: Cotal % Cover o	0/ /A/D)
Prevalence Index Worksheet Total % Cover of: Collaboration Continues	Prevalence Index Worksheet Total % Cover of: College Solution College College Solution College Solution College Solution College Col	<u>%</u> (A/B)
Sapiling/Shrub Stratum	Sapling/Shrub Stratum	
Solitation Sol	Sapling/Shrub Stratun	
Sapiling/Shrub Stratum (Plot size: 15-m radius 1	Sapling/Shrub Stratum (Plot size: 15-m radius 1 Carpinus caroliniana 5 Y FAC FAC Species 3 X 2 6 FAC Species 116 X 3 3 3 3 4 5 5 Y FAC Species 116 X 3 3 3 3 4 5 5 Y FAC Species 116 X 3 3 3 3 3 4 5 5 Y FAC Species 116 X 3 3 3 3 3 3 3 3 3	
Sapling/Shrub Stratum (Plot size: 15-m radius 1 Carpinus carolinlana 5 Y FAC FAC 116 X 3 = 348 FAC 12 Cary a alba 2 Y Cary a alba 2 Y Column totals 129 (A) 376 (B) 70 Column total 129 (A) 376 (B) 70 Column totals 129 (A) 376 (B) 70 C	Sapling/Shrub Stratum Plot size: 15-m radius 1 Carpinus caroliniana 5 Y FAC FAC FAC FAC FAC FAC FAC FAC Species 4 x	
Carpinus caroliniana S Y FAC FACU species A x 4 = 16 UPL species O x 5 = 0	Carpinus caroliniana 5	
2	2	48
Column totals 129 (A) 376 (B) Prevalence Index = B/A = 2.91 Hydrophytic Vegetation Indicators: 1 - Rapid test for hydrophytic vegetation X 2 - Dominance test is >50% X 3 - Prevalence index is \$3.0° 4 - Morphogical adaptations (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation X 2 - Dominance test is >50% X 3 - Prevalence index is \$3.0° 4 - Morphogical adaptations (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation (Provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation (Provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation (Provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation (Provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation (Provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation (Provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation (Provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation (Provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation (Provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation (Provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation (Provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation (Provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation (Provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation (Provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation (Provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation (Provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation (Provide supp	Column totals 129 (A) 37 Prevalence Index = BIA = 2.91 Hydrophytic Vegetation Indicators 1 - Rapid test for hydrophytic vegetation size is >50% 1 - Rapid test for hydrophytic vegetation size is >50% 2 - Dominance test is >50% 3 - Prevalence index is \$3.0° 4 - Morphogical adaptations (prosperate sheet) Problematic hydrophytic vegetation supporting data in Remarks or or separate sheet) Problematic hydrophytic vegetatic explain) 2 Gratiola neglecta 6 N OBL (explain) 3 Eupatorium capillifolium 3 N FACU ofeataenia rigidula 3 N FACU (explain) 4 Coleataenia rigidula 3 N FACU (explain) 5 Carpinus caroliniana 2 N FAC (explain) 6 Nyssa sylvatica 2 N FAC (explain) 9 Carex sp. 1 N FAC (explain) 10 Carex sp. 1 N FAC (explain) 10 Similax rotundifolia 1 N FAC (explain) 11 Smilax rotundifolia 3 Y FAC (explain) 1 N FAC (explai	6
Prevalence Index = B/A = 2.91	Prevalence Index = B/A = 2.91	
Prevalence Index = B/A = 2.91	Prevalence Index = B/A = 2.91 Hydrophytic Vegetation Indicators 1 - Rapid test for hydrophytic veg sales is >50% of total cover: 3.5	76 (B)
Hydrophytic Vegetation Indicators: 1 - Rapid test for hydrophytic vegetation X 2 - Dominance test is >50%	Hydrophytic Vegetation Indicators 1. Rapid test for hydrophytic vegetation 1. Rapid test for hydrophytic	``
1 - Rapid test for hydrophytic vegetation X 2 - Dominance test is >50% X 3 - Prevalence index is ≤3.0* 4 - Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet) Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic **Indicators of hydric soil and wetland hy	1 - Rapid test for hydrophytic veg X 2 - Dominance test is >50% of total cover: Solidar Solidaria Solidar Solidar Solidar Solidar Solidar Solidar	
X 2 - Dominance test is >50%	X 2 - Dominance test is >50%	
8	8	gotation
Total Cover	Total Cover	
Solition Stratum Solition Stratum Solition Stratum Solition Stratum Solition So	Solidar Coveries 1.4 Supporting data in Remarks or or separate sheet 1.4 Supporting data in Remarks or or separate sheet 1.5 Problematic hydrohytic vegetation Supporting data in Remarks or or separate sheet 1.5 Supporting data in Remarks or or separate sheet 1.5 Supporting data in Remarks or or separate sheet 1.5 Supporting data in Remarks or or separate sheet 1.5 Supporting data in Remarks or or separate sheet 1.5 Supporting data in Remarks or or separate sheet 1.5 Supporting data in Remarks or or separate sheet 1.5 Supporting data in Remarks or or separate sheet 1.5 Supporting data in Remarks or or separate sheet 1.5 Supporting data in Remarks or or separate sheet 1.5 Supporting data in Remarks or or separate sheet 1.5 Supporting data in Remarks or or separate sheet 1.5 Supporting data in Remarks or or separate sheet 1.5 Supporting data in Rema	
Herb Stratum Color	Herb Stratum Color size: 1m² Support terms of the following of total cover: 1.8 Herb Stratum Color size: 1m² Support terms of the first of total cover: 1.8 Hydrophytic vegetation Support terms of the first of total cover: 1.8 Hydrophytic vegetation Support terms of the first of total cover: 1.8 Support terms of the first of total cover: 1.8 Support terms of the first of total cover: 1.8 Support terms of the first of t	
Dichanthelium dichotomum	Dichanthelium dichotomum	n a
2 Gratiola neglecta 3 Eupatorium capillifolium 3 N FACU 4 Coleataenia rigidula 5 Carpinus caroliniana 6 Nyssa sylvatica 7 Vaccinium sp. 8 Dichanthelium commutatum 1 N FAC 9 Carex sp. 1 N SAC 10 Soliana (Plot size: 15-m radius) 1 Smilax rotundiffolia 3 N FAC 2 Vitis rotundiffolia 3 N FAC 4 Lonicera japonica 6 N SOBL 3 N FACU 3 N FACW 5 Paccus Sp. 1 N FAC 5 Soliana (Plot size: 15-m radius) 4 Lonicera japonica 6 N SOBL 3 N FACU 3 N FACW 5 Paccus Sp. 1 N FAC 1 N FAC 1 N FAC 5 Paccus Sp. 1 N FAC 1 N FAC 1 N FAC 1 N FAC 2 Vitis rotundiffolia 3 Y FAC 5 Vitis rotundiffolia 4 Y FAC 5 Vitis rotundiffolia 5 Rubus laudatus 4 Lonicera japonica 5 Soliana Soliana wetland hydrology must be present, unless disturbed or problematic 2 N FAC 2 N FAC 3 N FAC 4 N FAC 5 N FAC 5 Soliana Soliana wetland hydrology must be present, unless disturbed or problematic 5 Definitions of Four Vegetation Strata: Tree - Woody plants, excluding vines, 3 in. (7.6 cm or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall 4 Y FAC 5 Vitis rotundiffolia 7 Y FAC 8 Dichanthelium commutatum 9 Total Cover 1 N Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall Woody Vine - All woody vines greater than 3.28 ft in height. Hydrophytic vegetation	2 Gratiola neglecta 3 Eupatorium capillifolium 3 N FACU 4 Coleataenia rigidula 5 Carpinus caroliniana 6 Nyssa sylvatica 7 Vaccinium sp. 8 Dichanthelium commutatum 1 N FAC 9 Carex sp. 1 N 10 11 12 12 110 =Total Cover 50% of total cover: 55 20% of total cover: 22 Woody Vine Stratum (Plot size: 15-m radius) 1 Smilax rotundifolia 3 Y FAC 2 Vitis rotundifolia 3 Y FAC 3 Rubus laudatus 4 Lonicera japonica 50% of total cover: 4.5 20% of total cover: 1.8 4 Lonicera japonica 50% of total cover: 4.5 20% of total cover: 1.8 9 ETotal Cover 50% of total cover: 1.8 9 ETotal Cover 1 N 1 N 1 N 1 N 1 N 1 N 1 N 1 N 1 N 1 N	*
Statistic process Stat	3 Eupatorium capillifolium 3 N FACU 4 Coleataenia rigidula 3 N FACW 5 Carpinus caroliniana 6 Nyssa sylvatica 7 Vaccinium sp. 8 Dichanthelium commutatum 1 N FAC 9 Carex sp. 1 N 10 11 12 12 10 11 12 12 110 = Total Cover 50% of total cover: 55 20% of total cover: 22 Woody Vine Stratum (Plot size: 15-m radius) 1 Smilax rotundifolia 3 Y FAC 2 Vitis rotundifolia 3 Y FAC 3 Rubus laudatus 1 N FAC 4 Lonicera japonica 50% of total cover: 4.5 20% of total cover: 1.8 1 Hydrophytic vegetation 50% of total cover: 4.5 20% of total cover: 1.8 1 Hydrophytic vegetation 1 N FACU 2 Vita rotundifolia 9 Total Cover 50% of total cover: 4.5 20% of total cover: 1.8	IOH
4 Coleataenia rigidula 5 Carpinus caroliniana 2 N FAC 6 Nyssa sylvatica 7 Vaccinium sp. 8 Dichanthelium commutatum 9 Carex sp. 10 11 12 12 110 = Total Cover 1 Smilax rotundifolia 1 Smilax rotundifolia 2 Vitis rotundifolia 3 N FAC 7 PAC 8 Dichanthelium commutatum 1 N FAC 9 Carex sp. 1 N FAC 1 Tree – Woody plants, excluding vines, 3 in. (7.6 cm or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall Woody Vine Stratum (Plot size: 15-m radius) 1 Smilax rotundifolia 4 Y FAC 2 Vitis rotundifolia 3 Y FAC 4 Lonicera japonica 1 N FACU 5 Hydrophytic vegetation	Coleataenia rigidula 3	
Solution Company Content Con	Definitions of Four Vegetation Strata: Saping/Shrub — Woody Vine Stratum CPlot size: 15-m radius 1	gy must be
6 Nyssa sylvatica 7 Vaccinium sp. 8 Dichanthelium commutatum 9 Carex sp. 10 10 11 12 12 13 14 15 Smilax rotundifolia 1 Smilax rotundifolia 2 N FAC 2 Vitis rotundifolia 3 Rubus laudatus 4 Lonicera japonica 5 Suparative specific s	6 Nyssa sylvatica 7 Vaccinium sp. 8 Dichanthelium commutatum 1 N FAC 9 Carex sp. 10 11 12 12 13 14 15 Smilax rotundifolia 1 Smilax rotundifolia 2 Vitis rotundifolia 3 Rubus laudatus 4 Lonicera japonica 50% of total cover: 50%	
Tree – Woody plants, excluding vines, 3 in. (7.6 cm or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, 3 in. (7.6 cm or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall Smilax rotundifolia Smilax rotundifolia Tree – Woody plants, excluding vines, 3 in. (7.6 cm or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, 3 in. (7.6 cm or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, 3 in. (7.6 cm or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, 3 in. (7.6 cm or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, 3 in. (7.6 cm or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, 3 in. (7.6 cm or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody vines, 1 in height. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall Woody Vine – All woody vine – All woody vines greater than 3.28 ft in height. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.29 ft tall Herb – All herbaceous (non-woody) plants, regardless of size, and woody vines greater than 0.29 ft tall Herb – All herbaceous (non-woody) plants, regardless of size, and woody vines greater than 0.29 ft tall Herb – All herbaceous (non-woody) plants, regardless of size, and woody vines greater than 0.29 ft tall Herb – All herbaceous (non-woody) plants, regardless of size, and woody vines greater than 0.29 ft tall Herb – All herbaceous (non-wood	Tree - Woody plants, excluding vines, 3 or more in diameter at breast height (DB regardless of height. Sapling/Shrub - Woody plants, excluding vines, 3 or more in diameter at breast height (DB regardless of height. Sapling/Shrub - Woody plants, excluding vines, 3 or more in diameter at breast height (DB regardless of height. Sapling/Shrub - Woody plants, excluding vines, 3 or more in diameter at breast height (DB regardless of height. Sapling/Shrub - Woody plants, excluding vines, 3 or more in diameter at breast height (DB regardless of height. Sapling/Shrub - Woody plants, excluding vines, 3 or more in diameter at breast height (DB regardless of height. Sapling/Shrub - Woody plants, excluding vines, 3 or more in diameter at breast height (DB regardless of height. Sapling/Shrub - Woody plants, excluding vines, 3 or more in diameter at breast height (DB regardless of height. Sapling/Shrub - Woody plants, excluding vines, 3 or more in diameter at breast height (DB regardless of height. Sapling/Shrub - Woody plants, excluding vines, 3 or more in diameter at breast height (DB regardless of height. Sapling/Shrub - Woody plants, excluding vines, 3 or more in diameter at breast height (DB regardless of height. Sapling/Shrub - Woody plants, excluding vines, 3 or more in diameter at breast height (DB regardless of height. Sapling/Shrub - Woody vines, less than 3 in. DBH and greate equal to 3.28 ft (1 m) tall Herb - All herbaceous (non-woody) plant regardless of size, and woody vines greater the in height. Woody Vine - All woody vine - All woody vines greater the in height. Hydrophytic vegetation present? Yes X No	
8 Dichanthelium commutatum 9 Carex sp. 10 11 12	8 Dichanthelium commutatum 9 Carex sp. 11 N 10 11 12 Sapling/Shrub – Woody plants, exclusion vines, less than 3 in. DBH and greate equal to 3.28 ft (1 m) tall Herb – All herbaceous (non-woody) plant regardless of size, and woody plants less ft tall Y FAC 2 Vitis rotundifolia 3 Y FAC 3 Rubus laudatus 4 Lonicera japonica 1 N 50% of total cover: 9 = Total Cover in height. Herb – All herbaceous (non-woody) plant regardless of size, and woody plants less ft tall Woody Vine – All woody vines greater the in height. Hydrophytic vegetation present? Yes X No	
9 Carex sp. 1 N regardless of height. 10 sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall 12 the stratum (Plot size: 15-m radius) 1 Smilax rotundifolia 4 Y FAC 2 Vitis rotundifolia 3 Y FAC 3 Rubus laudatus 1 N FACU 5 Total Cover 5 Total Cover 6 Total Cover 6 Total Cover 7 Total Cover 7 Total Cover 8 Total Cover 9 Total Cover 1 N Total Cover 1 Total Cover 2 Total Co	Position of total cover: Sapling/Shrub - Woody plants, exclusions, less than 3 in. DBH and greate equal to 3.28 ft (1 m) tall Sapling/Shrub - Woody plants, exclusions, less than 3 in. DBH and greate equal to 3.28 ft (1 m) tall Herb - All herbaceous (non-woody) plant regardless of size, and woody plants less ft tall Smilax rotundifolia	
Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall 10	Sapling/Shrub – Woody plants, exclivines, less than 3 in. DBH and greate equal to 3.28 ft (1 m) tall 10	вн),
vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall Total Cover	vines, less than 3 in. DBH and greate equal to 3.28 ft (1 m) tall Solomote Stratum	
110 = Total Cover 55 20% of total cover: 22 Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall Woody Vine Stratum (Plot size: 15-m radius	equal to 3.28 ft (1 m) tall 110	luding
Total Cover Solve of total cover: Solve of total	Total Cover	er than or
Total Cover 50% of total cover: 55 20% of total cover: 22	110	
Solicition Stratum Solicition Solici	Solicited Soli	nts,
Woody Vine Stratum (Plot size: 15-m radius) 1 Smilax rotundifolia 4 Y FAC Woody Vine - All woody vines greater than 3.28 ft in height. Smilax rotundifolia 1 N FAC In height. Smilax rotundifolia 1 N FACU In height. Smilax rotundifolia 3 Y FAC In height. Smilax rotundifolia 1 N FACU Table in height. Smilax rotundifolia 1 N FACU Table in height. Smilax rotundifolia 1 N FACU Table in height. Table in heigh	Moody Vine Stratum (Plot size: 15-m radius)	
1 Smilax rotundifolia 4 Y FAC Woody Vine - All woody vines greater than 3.28 ft in height. 2 Vitis rotundifolia 3 Y FAC in height. 3 Rubus laudatus 1 N FACU 4 Lonicera japonica 1 N FACU 5 Hydrophytic vegetation	1 Smilax rotundifolia 2 Vitis rotundifolia 3 Y FAC in height. 3 Rubus laudatus 4 Y FAC in height. 4 Lonicera japonica 5	
2 Vitis rotundifolia 3 Y FAC in height. 3 Rubus laudatus 1 N FACU 5 Hydrophytic vegetation	2 Vitis rotundifolia 3 Y FAC 3 Rubus laudatus 4 Lonicera japonica 5 9 = Total Cover 50% of total cover: 4.5 20% of total cover: 1.8 in height. Hydrophytic vegetation present? Yes X No	han 3.28 ft
3 Rubus laudatus 4 Lonicera japonica 5 Hydrophytic 9 = Total Cover vegetation	3 Rubus laudatus 4 Lonicera japonica 5 9 = Total Cover 50% of total cover: 4.5 20% of total cover: 1.8 Hydrophytic vegetation present? Yes X No	5126
4 Lonicera japonica 1 N FACU 5 6	4 Lonicera japonica 5	-
5 Hydrophytic vegetation	5 Hydrophytic vegetation present? Yes X No	
6 Hydrophytic 9 = Total Cover vegetation	6 9 = Total Cover vegetation present? Yes X No	
9 = Total Cover vegetation	9 = Total Cover vegetation present? Yes X No	
	50% of total cover: 4.5 20% of total cover: 1.8 present? Yes X No	
50% of total cover: 4.5 20% of total cover: 1.8 present? Yes X No		
	Remarks: (Include photo numbers here or on a separate sheet)	
	Remarks: (Include photo numbers here or on a separate sheet)	
Remarks: (Include photo numbers here or on a separate sheet)	ternamer (morace prise name of on a coparate oncor)	

Sampling Point: Plot 23

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth	Matrix		Redo	ox Features	3							
(Inches)			Color (moist)	%	Type ¹	Loc ²	Texture	Remarks				
0 - 6	10YR 4/2	98	10YR 3/6	2	С	PL	silty clay loam					
6 - 12	10YR 5/3	98	10YR 5/8	2	С	М	silty clay loam					
¹ Type: C = 0	L Concentration, D = D	epletion RM	= Reduced Matrix	MS = Mask	ed Sand	Grains	² l ocation: PL = F	Pore Lining, M = Matrix				
	Indicators:						Indicators for Proble					
Histisol			Polyvalue Below (LRR S, T, U)	/ Surface (s	50)		1 cm Muck (A10) (_				
—	pipedon (A2)	-	Thin Dark Surfa	ce (S9) (LF	R S, T, U	J)	2 cm Muck (A10) (
_	listic (A3)	-	 Loamy Mucky M				Reduced Vertic (F					
_	en Sulfide (A4)	=	Loamy Gleyed N				(outside MLRA 1					
	d Layers (A5)	_	X Depleted Matrix			•	Piedmont Floodpla					
Organic	Bodies (A6) (LRR P	P, T, U)	Redox Dark Sur	face (F6)			(LRR P, S, T)	cone (1 10)				
5 cm M	ucky Mineral (A7) (L l	RR P, T, U)	Depleted Dark S	Surface (F7)	•	Anomalous Bright	nomalous Bright Loamy Soils (F20)				
Muck P	resence (A8) (LRR L	J)	Redox Depressi	ons (F8)	, , ,							
1 cm M	uck (A9) (LRR P. T)		Marl (F10) (LRR	l U)	al (TF12)							
Deplete	d Below Dark Surfac	e (A11)	Depleted Ochric	(F11) (ML	RA 151)		Very Shallow Dark	Very Shallow Dark Surface (TF12)				
Thick D	ark Surface (A12)		Iron-Manganese	Masses (F	emarks)							
Coast F	Prairie Redox (A16)	_	(LRR O, P, T)									
(MLRA	150A)	_	Umbric Surface	(F13) (LRF	R P, T, U))						
Sandy I	Mucky Mineral (S1)	_	Delta Ochric (F1	7) (MLRA	151)		3 Indicators of budg	³ Indicators of hydrophytic vegetation and weltand hydrology must be				
LRR O	, S)	_	Reduced Vertic				and weltand hydro					
— ·	Gleyed Matrix (S4)	-	Piedmont Flood	plain Soils	(F19) (MI	LRA 14	A) present, unless disturbed or problematic					
	Redox (S5)		Anomalous Brig	-	•))						
─ ─ ''	d Matrix (S6)	<u>-</u>	(MLRA 149A, 1	53C, 153D))							
Dark Su	urface (S7) (LRR P, S	S, T, U)										
Restrictive	Layer (if observed)):										
Туре:												
Depth (inch	es):		_	Hydric soi	l presen	t?	Yes X	No				
Damarka												
Remarks:												

Project/Site Moro Creek Mitigation Bank			Cit	y/County:	Bunn	Sampling D	Date: 2018/09/13				
Applicant/Owner: Arkansas Department of Transp			Transportat	on State: AR		Sampling P	oint: Plot 24				
Investigator(s):	Kayti	Ewing, Joe Le	dvina	Section	T8S R14W S24						
Landform (hillslope	, terrace, etc.):	none	Local reli	ef (concave, co	onvex, none):	none					
Slope (%): 0	Lat:			Long:		Datum:	WGS84				
Soil Map Unit Name	e	Wehadke	e silt loam		NWI Class	sification:	PFO1A				
Are climatic/hydrolo	ogic conditions of	the site typica	l for this time	of the year? Yes	X No	(If no, e	explain in remarks)				
Are vegetation	, soil	, or hydro	logysi	ignificantly disturb	ped? Are	e "normal circum	stances" present?				
Are vegetation	, soil	, or hydro	logyn	aturally problema		Yes X					
					· ·	· ·	any answers in Remarks.)				
SUMMARY OF FI				npling point loc	ations, trans	ects, important	features, etc.				
Hydrophytic vegeta	-	YesX		4							
Hydric soil present?		Yes	No X _								
Wetland hydrology	present?	Yes X	No	within a wetl	and?	Yes	NoX				
Remarks: (Explain	alternative proce	dures here or	in a separate	report.)							
HYDROLOGY											
Wetland Hydrolog	y Indicators:				Seco	ondarv Indicators	(minimum of two required)				
Primary Indicators	(minimum of one	is required; ch	neck all that a	apply)		Surface Soil Cra	, ,				
Surface Water (A1)		Aquatic Fa	nuna (B13)		_	ated Concave Surface (B8)				
High Water Tab	,	_		osits (B15) (LRR (U)						
Saturation (A3)	(1_)	_		Sulfide Odor (C1)		Drainage Patterns (B10) Moss Trim Lines (B16)					
	1)	_				Dry-Season Water Table (C2)					
Water Marks (B1) Sediment Deposits (B2)			Roots (C3)	Rhizospheres on Li \	ving	Crayfish Burrows (C8)					
Drift Deposits (E		_		, of Reduced Iron (0	<u>—</u> 24)	Saturation Visible on Aerial Imagery (C9)					
Algal Mat or Cru	-				<u></u>	X Geomorphic Position (D2)					
Iron Deposits (B5)			Soils (C6)	n Reduction in Till	ed <u></u>	Shallow Aquitard					
Inundation Visible on Aerial Imagery (B7)				Surface (C7)	X	st (D5)					
Water-Stained Leaves (B9)				olain in Remarks)		Sphagnum moss (D8) (LRR T, U)					
	. ,		_ ` ` '	,							
Field Observation		NI-	V D4	.l. (:)		Mada and book					
Surface water pres		No		h (inches)	-	wetiand nydr	ology present?				
Water table presen		No		h (inches)	- ,	V	NI -				
Saturation present?		No	Dept	h (inches)	- '	res X	No				
(includes capillary f											
Describe recorded	data (stream gau	ige, monitoring	j well, aerial p	photos, previous	nspections), if	available:					
Remarks:											

VEGETATION -- Use scientific names of plants.

_	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	
1	70 00101	Opooloo	Olddo	Number of Dominant Species that are OBL, FACW, or FAC: 7 (A)
· .				that are OBL, FACW, or FAC:(A)
2				Total Number of Dominant
3				Species Across all Strata: (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 100.00% (A/B)
6				
7				Prevalence Index Worksheet
8				Total % Cover of:
		Total Cove	er	OBL species 60 x 1 = 60
50% of total cover:	20% (of total cover	r:	FACW species 31 x 2 = 62
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 31 x 3 = 93
1 Acer rubrum	5	Υ	FAC	FACU species 3 x 4 = 12
2 Quercus nigra	4	<u> </u>	FAC	UPL species
3		<u> </u>	170	Column totals 125 (A) 227 (B)
1				Prevalence Index = B/A = 1.82
4				· · · · · · · · · · · · · · · · · · ·
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				X 3 - Prevalence index is ≤3.0*
		=Total Cove		4 - Morphogical adaptations* (provide
50% of total cover: 4.	5 20% (of total cover	r: 1.8	supporting data in Remarks or on a
Herb Stratum (Plot size: 1m²)			separate sheet)
1 Persicaria hydropiperoides	35	Υ	OBL	Problematic hydrophytic vegetation*
2 Boehmeria cylindrica	25	Y	FACW	(explain)
3 Ludwigia alternifolia	25	Y	OBL	*In disabase of bushis as il and water of bushes are be
4 Carex tribuloides	5	N	FACW	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
5 Dichanthelium dichotomum	4		FAC	Definitions of Four Vegetation Strata:
6 Phytolacca americana	3		FACU	Deminions of Your Vegetation Strata.
7 Panicum verrucosum	1	N	FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
			FACVV	or more in diameter at breast height (DBH),
8				regardless of height.
9				
10				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or
11				equal to 3.28 ft (1 m) tall
12				
		=Total Cove		Herb – All herbaceous (non-woody) plants,
50% of total cover: 4	9 20% (of total cover	r: 19.6	regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius)			ft tall
1 Vitis rotundifolia	10	Υ	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Smilax glauca	8	Y	FAC	in height.
3				
4				
5				
6				Headara heatha
	18	Total Cove		Hydrophytic
50% of total cover:		of total cover		vegetation present? Yes X No
30 % of total cover.	20700	n total cover		present: res X No
D	-414\			
Remarks: (Include photo numbers here or on a separa	ate sneet)			

Sampling Point: Plot 24

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r confi	rm the absence of ind	icators.)									
Depth Matrix Rec					s												
(Inches)	Color (moist) %		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks									
0 - 4	10YR 4/2	100															
4 - 6	10YR 5/3	88	10YR 5/8	2	С	М	silty clay loam										
	10YR 6/1	10															
6 - 12	10YR 5/3	78	10YR 5/6	2	С	М	silty clay loam										
	10YR 6/1	20															
¹ Type: C = (Concentration D = D	enletion RM	1 = Reduced Matrix, I	MS = Masi	ked Sand	Grains	² l ocation: PL = P	ore Lining, M = Matrix									
	Indicators:	opiotion, rav					Indicators for Problem										
Histisol			Polyvalue Below (LRR S, T, U)	Surrace (58)		1 cm Muck (A10) (I	_									
—	pipedon (A2)	•	Thin Dark Surfac	ce (S9) (Li	RR S. T. L	J)	2 cm Muck (A10) (I	-									
_	istic (A3)	-	Loamy Mucky M				Reduced Vertic (F1	•									
_	en Sulfide (A4)	-	Loamy Gleyed M		- /		(outside MLRA 15										
	d Layers (A5)	•	Depleted Matrix			•	Piedmont Floodpla										
	Bodies (A6) (LRR P	P, T, U)	· Redox Dark Surl	` '			(LRR P, S, T)	III 00II3 (1-19)									
	ucky Mineral (A7) (L l		— Depleted Dark S		7)	•	Anomalous Bright I	oamy Soils (F20)									
	resence (A8) (LRR L		Redox Depression	•	,		(MLRA 153B)										
1 cm M	uck (A9) (LRR P. T)	•	Marl (F10) (LRR	(U)	al (TF12)												
 Deplete	d Below Dark Surfac	e (A11)	Depleted Ochric	(F11) (ML	.RA 151)	•	Very Shallow Dark										
Thick D	ark Surface (A12)	•	 Iron-Manganese	se Masses (F12) Other (explain in remarks)													
Coast P	rairie Redox (A16)		(LRR O, P, T)														
(MLRA		•	Umbric Surface	(F13) (LRI	R P, T, U)												
Sandy N	Mucky Mineral (S1)	•	Delta Ochric (F1	7) (MLRA	151)		3	2									
(LRR [°] O		•	Reduced Vertic	(F18) (ML I	RA 150A,	150E	³ Indicators of hydrophytic vegetation and weltand hydrology must be										
Sandy (Gleyed Matrix (S4)	•	Piedmont Flood	olain Soils	(F19) (MI	_RA 14	A) present, unless disturbed or										
Sandy F	Redox (S5)	•	—— Anomalous Brigl				problematic										
Stripped	d Matrix (S6)	-	(MLRA 149A, 1	53C, 153D)												
Dark Sເ	ırface (S7) (LRR P, S	S, T, U)															
Postriotivo	Layer (if observed)																
Type:	Layer (II observed)	•															
Depth (inch	Hydric so	il present	17	Yes	No X												
						•											
Remarks:																	

Project/Site Moro Creek Mitigation Bank			Cit	y/County:	Bunn	unn S		te:	2018/09/17		
	Owner: Arkansas Department of Transportation						ampling Poi	Plot 25			
Investigator(s):	Section, Township, Range: T8S R14W S24										
Landform (hillslope,	terrace, etc.):	none	Local re	lief (concave, c	onvex, r	none):	n	one			
Slope (%): 0 Lat:				Long:		D	atum:	W	GS84		
Soil Map Unit Name		NWI Class	Classification: PFO1A								
Are climatic/hydrolo	gic conditions of	the site typical	for this time	of the year? Ye	es X No_		(If no, ex	plain in re	marks)		
Are vegetation	, soil	, or hydrol	ogysi	ignificantly distu	rbed? Ar	e "norm	al circumst	ances" pr	esent?		
Are vegetation	, soil	, or hydrol	ogyna	aturally problem	atic?	Ye	es <u>X</u>	No			
					•			•	s in Remarks.)		
SUMMARY OF FI				npling point lo	ocations, trans	sects, i	mportant f	eatures,	etc.		
Hydrophytic vegeta	•	Yes X	No	4							
Hydric soil present?		Yes X	No	Is the samp							
Wetland hydrology	present?	Yes X	No	within a we	tland?	Yes_	<u> </u>	No			
HYDROLOGY											
Wetland Hydrology	-				Sec	•	•		of two required)		
Primary Indicators (minimum of one i	s required; che	eck all that a	ipply)			ce Soil Cracl				
Surface Water (A	•	_	Aquatic Fa				rsely Vegetated Concave Surface (B8)				
High Water Tabl	e (A2)	_		osits (B15) (LRR		Drainage Patterns (B10)					
Saturation (A3)		_	Hydrogen \$	Sulfide Odor (C1		Moss Trim Lines (B16)					
Water Marks (B1			Oxidized R	Rhizospheres on	Living						
Sediment Depos		_	Roots (C3)	•		Crayfish Burrows (C8)					
Drift Deposits (B	-	_	Presence of Reduced Iron (C4)			Saturation Visible on Aerial Imagery (C9)					
Algal Mat or Cru				n Reduction in T	Sadollon in Tilloa			eomorphic Position (D2)			
Iron Deposits (B5)			Soils (C6)					nallow Aquitard (D3)			
	le on Aerial Image	ry (B7)		Surface (C7)	· · · · · · · · · · · · · · · · · · ·			AC-Neutral Test (D5)			
Water-Stained Leaves (B9)			Other (Exp	olain in Remarks)	ı Remarks)Sph			phagnum moss (D8) (LRR T, U)			
Field Observations	s:										
Surface water prese	ent? Yes	No No	X Dept	h (inches)	_	Wetl	and hydro	logy pres	ent?		
Water table present	-	No.		h (inches)							
Saturation present?		No	X Dept	h (inches)	_ `	Yes _	X	No			
(includes capillary fi											
Describe recorded of	yuag maerta) atak	ge, monitoring	well, aerial p	ohotos, previous	s inspections), if	availab	le:				
Remarks:											

Sampling Point:

Plot 25

Profile Des	cription: (Describe	to the depti	n needed to docum	ent the in	dicator o	r confi	rm the absence of indi	icators.)			
Depth	Matrix		Red	ox Feature	s						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 8	10YR 4/2	49	10YR 5/6	2	С	M	silty clay loam				
	10YR 5/2	49									
8 - 12	10YR 4/2	39	10YR 5/8	2	С	M	silty clay				
	10YR 5/2	59									
¹ Type: C = 0	Concentration, D = D	epletion RM	= Reduced Matrix	MS = Mas	ked Sand	Grains	² Location: PL = Po	ore Lining, M = Matrix			
	Indicators:						Indicators for Problem				
Histisol			Polyvalue Belov (LRR S, T, U)	v Suriace (30)		1 cm Muck (A10) (L	-			
_	pipedon (A2)	-	Thin Dark Surfa	ce (S9) (LI	RR S. T. U	J) -	2 cm Muck (A10) (L	•			
_	istic (A3)	-	 Loamy Mucky M			-					
	en Sulfide (A4)	=	Loamy Gleyed N					Reduced Vertic (F18) (outside MLRA 150A, B)			
Stratifie	d Layers (A5)	_	X Depleted Matrix			-		Piedmont Floodplain Soils (F19)			
Organic	Bodies (A6) (LRR P	P, T, U)	Redox Dark Sur	face (F6)			(LRR P, S, T)				
5 cm Mi	ucky Mineral (A7) (L l	RR P, T, U)	Depleted Dark S	Surface (F7	')	_	Anomalous Bright L	oamy Soils (F20)			
Muck Presence (A8) (LRR U) Redox Depre			Redox Depress	ions (F8)		_	(MLRA 153B)				
1 cm Mi	uck (A9) (LRR P. T)	_	Marl (F10) (LRF	R U)		_	Red Parent Materia	l (TF12)			
Deplete	d Below Dark Surfac	ce (A11)	Depleted Ochric	(F11) (ML	.RA 151)	_	Very Shallow Dark	Surface (TF12)			
Thick D	ark Surface (A12)		Iron-Manganese	e Masses (F12)	-	Other (explain in re	marks)			
Coast P	rairie Redox (A16)	=	(LRR O, P, T)								
(MLRA	150A)	_	Umbric Surface)					
	Mucky Mineral (S1)	_	Delta Ochric (F1		-		³ Indicators of hydro	³ Indicators of hydrophytic vegetation			
(LRR O		_	Reduced Vertic				and weltand hydrology must be A) present, unless disturbed or problematic				
	Gleyed Matrix (S4)	_	Piedmont Flood	plain Soils	(F19) (MI	LRA 14					
·	Redox (S5)		Anomalous Brig	-))					
─ ─ ''	d Matrix (S6)	- - T IIV	(MLRA 149A, 1	53C, 153D)						
— Dark St	ırface (S7) (LRR P, \$	5, 1, 0)									
Restrictive	Layer (if observed)):									
Туре:											
Depth (inch	es):			Hydric so	il presen	t?	Yes X	No			
Remarks:											
rtomanto.											

Project/Site	Moro Creek Mit	igation Bank	City	y/County:	Bunn	Sampling I	Date: 2018/09/17
Applicant/Owner:		_				Sampling F	
Investigator(s):		Ewing, Joe Le			on, Township, Ra	ange:	T8S R14W S24
Landform (hillslope	, terrace, etc.):		none	Local re	elief (concave, co	onvex, none):	none
Slope (%):0	Lat:			Long:		Datum:	WGS84
Soil Map Unit Nam	e	Wehadke	e silt loam		NWI Class	sification:	PFO1A
Are climatic/hydrolo	ogic conditions of	the site typica	al for this time	of the year? Ye	es <u>X</u> No	(If no,	explain in remarks)
Are vegetation	, soil	, or hydro	ologysi	ignificantly distu	ırbed? Ar	e "normal circum	nstances" present?
Are vegetation	, soil	, or hydro	ologyna	aturally problem	natic?	Yes X	No
					(If	needed, explain	any answers in Remarks.)
SUMMARY OF FI		h site map s	howing san	npling point lo	ocations, trans	ects, importan	t features, etc.
Hydrophytic vegeta		Yes X		_			
Hydric soil present		Yes	No_ <u>X</u>	- is the same			
Wetland hydrology	present?	Yes X	No	within a we	tland?	Yes	No <u>X</u>
HYDROLOGY							
Wetland Hydrolog	-				Seco	-	s (minimum of two required)
Primary Indicators	(minimum of one	is required; ch	ieck all that a	ipply)		_Surface Soil Cra	
Surface Water (` '	_	Aquatic Fa			_	ated Concave Surface (B8)
High Water Tab		_		osits (B15) (LRF		_Drainage Patter	
Saturation (A3)		_	Hydrogen S	Sulfide Odor (C1		_Moss Trim Line	s (B16)
Water Marks (B			Oxidized R	Rhizospheres on	Living	_Dry-Season Wa	
Sediment Depo		_	Roots (C3)	•		_Crayfish Burrow	
Drift Deposits (E	-	_	Presence of	of Reduced Iron		_	ble on Aerial Imagery (C9)
Algal Mat or Cru				n Reduction in T	illed X	Geomorphic Po	
Iron Deposits (E	•	_	Soils (C6)			_Shallow Aquitar	
	ole on Aerial Image	ry (B7)		Surface (C7)		FAC-Neutral Te	` '
Water-Stained L	₋eaves (B9)		Other (Exp	olain in Remarks	<u> </u>	Sphagnum mos	ss (D8) (LRR T, U)
Field Observation	s:						
Surface water pres	ent? Yes	No	X Depti	h (inches)		Wetland hyd	rology present?
Water table presen	t? Yes	No	X Depti	h (inches)			
Saturation present	? Yes	No	X Depti	h (inches)	\ \ \ \	res X	No
(includes capillary t							
Describe recorded	data (stream gau	ge, monitoring	յ well, aerial բ	ohotos, previous	s inspections), if	available:	
Remarks:							

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	
		•		Number of Dominant Species
1 Ilex opaca	10	<u> </u>	FAC	that are OBL, FACW, or FAC:3(A)
2 Betula nigra	4	<u> </u>	FACW	Total Number of Dominant
3				Species Across all Strata: 4 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 75.00% (A/B)
6				
7				Prevalence Index Worksheet
0				
8				Total % Cover of:
		= Total Cove		OBL species <u>9</u> x 1 = <u>9</u>
50% of total cover:		of total cover	r: 2.8	FACW species 80 x 2 = 160
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 14 x 3 = 42
1 Betula nigra	2	N	FACW	FACU species 0 x 4 = 0
2 Cephalanthus occidentalis	1	N	OBL	UPL species 0 x 5 = 0
-	- <u>-</u>		FACW	<u> </u>
3 Quercus texana		<u>IN</u>	FACVV	`````` _
4				Prevalence Index = B/A = 2.05
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				X 3 - Prevalence index is ≤3.0*
	4	Total Cove		
50% of total cover:		of total cover		4 - Morphogical adaptations* (provide
· ·	20%	or total cover	0.0	supporting data in Remarks or on a
Herb Stratum (Plot size: 1m ²	_)			separate sheet)
1 Panicum verrucosum	65	Y	FACW	Problematic hydrophytic vegetation*
2 Gratiola neglecta	8	N	OBL	(explain)
3 Rhexia mariana	5	N	FACW	*Indicators of budgie cail and watland budgeloon must be
4 Boehmeria cylindrica	2		FACW	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
5 Spermacoce glabra	- -		FACW	Definitions of Four Vegetation Strata:
_ 	· — ·		TAOW	Definitions of Four Vegetation Strata.
6				
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8				or more in diameter at breast height (DBH),
9				regardless of height.
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12				equal to 3.28 ft (1 m) tall
12	- 04	T-4-1 0		Harb All barbassaus (non woody) plants
500/ 61 1 1		Total Cove		Herb – All herbaceous (non-woody) plants,
	0.5 20% c	of total cover	r: 16.2	regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius	_)			ft tall
1 Rubus laudatus	17	Υ		Woody Vine – All woody vines greater than 3.28 ft
2 Smilax rotundifolia	3	N	FAC	in height.
3 Bignonia capreolata	1		FAC	
4				
· ————————————————————————————————————				
5				
6				Hydrophytic
	21:	=Total Cove	er	vegetation
50% of total cover: 1	0.5 20% 0	of total cover	r: 4.2	present? Yes X No
Remarks: (Include photo numbers here or on a sepa	rate sheet)			
tomano. (moiddo prioto namboro noro or on a cope	irato orioot)			

Sampling Point: Plot 26

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the inc	dicator o	r confi	irm the absence of inc	licators.)		
Depth	Matrix		Redo	ox Features	S					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 12	10YR 4/3						silty clay loam			
1- 0	0	- 1 t' - DN	L. D. L. L. IM. 65.	140 14 1	10 1		21	Land Carlon Man Mark Co.		
	Concentration, D = D	epietion, Riv				Grains		ore Lining, M = Matrix		
_	Indicators:		Polyvalue Below	/ Surface (S	S8)		Indicators for Problem	-		
Histisol	• •	-	(LRR S, T, U)	(OO) (I F			1 cm Muck (A10) (-		
	pipedon (A2)	-	Thin Dark Surface				2 cm Muck (A10) (-		
	istic (A3)	-	Loamy Mucky M		(LRR O)		Reduced Vertic (F			
	en Sulfide (A4)		Loamy Gleyed N	, ,		•	(outside MLRA 15	ЮA, B)		
	d Layers (A5)		Depleted Matrix	. ,			Piedmont Floodpla	in Soils (F19)		
— ·	Bodies (A6) (LRR P		Redox Dark Sur			,		_(LRR P, S, T)		
	ucky Mineral (A7) (L		Depleted Dark S	-)			Anomalous Bright Loamy Soils (F20) (MLRA 153B)		
Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P. T)		Redox Depressi				L (TE 40)				
			Marl (F10) (LRR	-	DA 454)	,	Red Parent Materia			
	d Below Dark Surfac	e (A11)	Depleted Ochric	(F11) (ML	RA 151)	•	Very Shallow Dark	· ·		
I hick D	ark Surface (A12)		Iron-Manganese	Masses (F	- 12)	•	Other (explain in re	marks)		
	Prairie Redox (A16)		(LRR O, P, T)	(E40) (I BE						
(MLRA	150A)	-	Umbric Surface							
	Mucky Mineral (S1)	-	Delta Ochric (F1		-		³ Indicators of hydro	³ Indicators of hydrophytic vegetation		
(LRR O	· ·	-	Reduced Vertic	. , .			and weltand hydrology must be			
	Gleyed Matrix (S4)	-	Piedmont Flood	plain Soils	(F19) (M I	LRA 14	pA) present, unless disturbed or problematic			
	Redox (S5)		Anomalous Brig))				
	d Matrix (S6)		(MLRA 149A, 1	53C, 153D))					
Dark St	ırface (S7) (LRR P, S	S, T, U)								
Restrictive	Layer (if observed)	:								
Type:	,									
Depth (inch	es):			Hydric soi	l presen	t?	Yes	No X		
Remarks:										

Project/Site	Moro Creek Mitiga	ation Bank	City/	/County:	Bunn/Cleve	and S	Sampling Da	ate: 2018/09/17
Applicant/Owner:	Arkansas Dep	artment of T	ransportatio	on State:	AR	S	Sampling Po	oint: Plot 27
Investigator(s):	Kayti Ew	ring, Joe Led	dvina	Sect	ion, Townshiր	p, Range:_		T8S R14W S24
Landform (hillslope	, terrace, etc.):	n	none	Local	relief (concav	e, convex,	none):	none
Slope (%): 0	Lat:			Long:			Datum:	WGS84
Soil Map Unit Name	e	Wehadkee	silt loam		NWI (Classificatio	n:	PFO1A
Are climatic/hydrolo	ogic conditions of th	e site typical	for this time of	of the year?	∕es <u>X</u> N	o	(If no, ex	xplain in remarks)
Are vegetation	, soil	, or hydrolo	ogysig	nificantly dist	turbed?	Are "norn	nal circums	stances" present?
Are vegetation	, soil	, or hydrolo	ogynat	turally proble	matic?		es X	
						•		any answers in Remarks.)
	NDINGS - Attach		owing sam	pling point	locations, ti	ransects,	important	features, etc.
Hydrophytic vegeta	*	Yes X	No					
Hydric soil present?		Yes X	No	Is the sam	-			
Wetland hydrology	present?	Yes X	No	within a w	etland?	Yes_	X	No
	alternative procedu		,	, ,				
HYDROLOGY								
Wetland Hydrolog	· -					Secondary	Indicators ((minimum of two required)
Primary Indicators ((minimum of one is	required; che	ck all that ap	ply)		Surfa	ice Soil Crac	cks (B6)
Surface Water (A1)	_	_Aquatic Fau			Spars	sely Vegetat	ted Concave Surface (B8)
High Water Tab	le (A2)	_	_Marl Depos	sits (B15) (LR	:RU)		age Pattern	
Saturation (A3)		_	_ Hydrogen Si	ulfide Odor (C	;1)	Moss	Trim Lines	(B16)
Water Marks (B	1)		Oxidized Rhizospheres on Living			Dry-S	Season Wate	er Table (C2)
Sediment Depos	sits (B2)	_	Roots (C3)			Crayf	fish Burrows	; (C8)
Drift Deposits (B	33)	_	Presence of	Reduced Iron	า (C4)			e on Aerial Imagery (C9)
Algal Mat or Cru	ıst (B4)		Recent Iron	Reduction in	Tilled	X Geon	norphic Posi	ition (D2)
Iron Deposits (B	·	_	Soils (C6)				ow Aquitard	
Inundation Visib	le on Aerial Imagery	(B7)	Thin Muck S	Surface (C7)			Neutral Test	• •
Water-Stained L	eaves (B9)	_	Other (Expla	ain in Remark	s)	Spha	gnum moss	s (D8) (LRR T, U)
Field Observation	s:							
Surface water prese	ent? Yes	No	X Depth	(inches)		Wef	tland hydro	ology present?
Water table presen	t? Yes	No	X Depth	(inches)				
Saturation present?	? Yes	No	X Depth	(inches)		Yes	X	No
(includes capillary f	ringe)							
Describe recorded	data (stream gauge	, monitoring	well, aerial ph	notos, previo	us inspection	s), if availal	ble:	
Remarks:								

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 27 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **0** x 1 = 20% of total cover: **FACW** species **105** x 2 = 50% of total cover: 210 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species **18** x 3 = FACU species 0 1 Ilex opaca **FAC** x 4 = Quercus phellos FACW UPL species x 5 = 0 Column totals **123** (A) **264** (B) Prevalence Index = B/A = 2.15 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation X 2 - Dominance test is >50% X 3 - Prevalence index is ≤3.0* = Total Cover 10 4 - Morphogical adaptations* (provide 50% of total cover: 20% of total cover: supporting data in Remarks or on a Herb Stratum (Plot size: separate sheet) Problematic hydrophytic vegetation* 1 Panicum verrucosum **FACW** (explain) **FACW** 2 Boehmeria cylindrica 3 Pluchea camphorata 5 Ν **FACW** *Indicators of hydric soil and wetland hydrology must be llex opaca 5 Ν **FAC** present, unless disturbed or problematic N 5 Coleataenia rigidula **FACW Definitions of Four Vegetation Strata:** Dichanthelium dichotomum **FAC** Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. 9 Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall = Total Cover Herb - All herbaceous (non-woody) plants, 110 regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: 22 Woody Vine Stratum (Plot size: 15-m radius) Vitis cinerea Woody Vine – All woody vines greater than 3.28 ft **FAC FAC** Smilax glauca 3 4 5 Hydrophytic 3 = Total Cover vegetation Yes X No 20% of total cover: 0.6 present? 50% of total cover: 1.5 Remarks: (Include photo numbers here or on a separate sheet)

Profile Des	cription: (Describe	to the depti	n needed to docum	ent the inc	dicator o	r confi	irm the absence of ind	icators.)		
Depth	Matrix		Rede	ox Features	S					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 8	10YR 3/2	98	10YR 3/6	2	С	М	silty clay loam			
8 - 12	10YR 3/2	49	10YR 4/6	2	С	М	silty clay loam			
			10YR 6/1	49	D	М				
¹ Type: C = 0	Concentration, D = D	epletion, RM	= Reduced Matrix,	MS = Mask	ked Sand	Grains	s. ² Location: PL = P	ore Lining, M = Matrix		
Hydric Soil	Indicators:		Polyvalue Below	v Surface (S8)		Indicators for Problem	-		
Histisol	(A1)	=	(LRR S, T, U)				1 cm Muck (A10) (I	•		
_	pipedon (A2)	_	Thin Dark Surfa			•	2 cm Muck (A10) (I	LRR S)		
_	istic (A3)	_	Loamy Mucky M		(LRR O)		,	Reduced Vertic (F18)		
	en Sulfide (A4)	=	Loamy Gleyed N			-	(outside MLRA 15	0A, B)		
	d Layers (A5)		Depleted Matrix	` '				Piedmont Floodplain Soils (F19)		
	Bodies (A6) (LRR P	_	Redox Dark Sur			-	(LRR P, S, T)			
	ucky Mineral (A7) (L	_		•)		Anomalous Bright I (MLRA 153B)	_oamy Soils (F20)		
_		Redox Depressi Marl (F10) (LRR			-	Red Parent Materia	J (TE12)			
_	d Below Dark Surfac	- - (Δ11)	Depleted Ochric	,	RA 151)	-	Very Shallow Dark	· ·		
	ark Surface (A12)	_			-	-	Other (explain in re	·		
			Iron-Manganese (LRR O, P, T)	e Masses (r	-12)	•	Outer (explain in re	marko		
(MLRA	Prairie Redox (A16) 150A)	_	Umbric Surface	(F13) (LRF	R P. T. U))				
	, Mucky Mineral (S1)	-	— Delta Ochric (F1				_			
(LRR O		=	Reduced Vertic		-	150E	³ Indicators of hydro			
Sandy (Gleyed Matrix (S4)	_	Piedmont Flood	plain Soils	(F19) (M I	LRA 14	and weltand hydrol I 9A) present, unless dis	ogy must be turbed or		
Sandy F	Redox (S5)	-	— Anomalous Brig				problematic			
Stripped	d Matrix (S6)	_	(MLRA 149A, 1	-		,				
Dark Sເ	ırface (S7) (LRR P, S	S, T, U)								
Rostrictivo	Layer (if observed)	١•								
Type:	Layer (ii observed)	,-								
Depth (inch	es):			Hydric soi	l presen	t?	Yes X	No		
	, <u> </u>									
Remarks:										

Project/Site	Moro Creek Miti	igation Bank		City/County:	Bunn/Cleve	eland S	Sampling Da	ate: 2018/09/18		
Applicant/Owner:	Arkansas De	partment of	Transport	ation State:	n State: AR S			int: Plot 28		
Investigator(s):	Kayti E	wing, Joe Le	dvina	Sect	ion, Townshi	p, Range:	•	T8S R14W S24		
Landform (hillslope	, terrace, etc.):		none	Local	relief (concav	e, convex,	none):	none		
Slope (%): 0	Lat:			Long:			oatum:	WGS84		
Soil Map Unit Name	e	Wehadke	e silt loam	1	NWI (Classificatio	n:	PFO1A		
Are climatic/hydrolo	ogic conditions of	the site typica	I for this tin	ne of the year?`	Yes X N	0	(If no, ex	rplain in remarks)		
Are vegetation	, soil	, or hydro	logy	significantly dis	turbed?	Are "norn	nal circums	tances" present?		
Are vegetation	, soil	, or hydro	logy	naturally proble	matic?	Y	es X	No		
						(If needed	d, explain a	ny answers in Remarks.)		
SUMMARY OF FI	NDINGS - Attac	h site map s	howing sa	ampling point	locations, t	ransects, i	mportant	features, etc.		
Hydrophytic vegeta	tion present?	Yes X	No							
Hydric soil present?	?	Yes X	No	Is the san	pled area					
Wetland hydrology	present?	Yes X	No	within a w	etland?	Yes_	X	No		
Remarks: (Explain	alternative proced	lures nere or i	n a separa	те героп.)						
HYDROLOGY										
Wetland Hydrolog	y Indicators:					Secondary	Indicators ((minimum of two required)		
Primary Indicators	(minimum of one i	s required; ch	eck all that	apply)		=	ce Soil Crac			
Surface Water (A1)		Aquatic I	Fauna (B13)				ed Concave Surface (B8)		
High Water Tab	,			posits (B15) (LF	RR U)		age Patterns			
Saturation (A3)	,			n Sulfide Odor (0	•		Trim Lines			
Water Marks (B	1)			•				er Table (C2)		
Sediment Depos	•		Oxidized Rhizospheres on Living Roots (C3)			X Crayfish Burrows (C8)				
Drift Deposits (E				e of Reduced Iro	n (C4)			on Aerial Imagery (C9)		
Algal Mat or Cru	•						norphic Posi			
Iron Deposits (B			Soils (C6	ron Reduction in	rillea		ow Aquitard			
	ole on Aerial Image	ry (B7)		ck Surface (C7)			Neutral Test			
Water-Stained L	_			xplain in Remark	s)			(D8) (LRR T, U)		
	. ,		_ `	•	<u>′</u>					
Field Observation		NI-	V D-			\A/-4				
Surface water pres	•	No		pth (inches)		vvet	iana nyara	ology present?		
Water table presen	•	No		pth (inches)			V			
Saturation present?	-	No	De	pth (inches)		Yes _	<u>X</u>	No		
(includes capillary f				La L		.) . (6) . 1				
Describe recorded	data (stream gau	je, monitoring	ı well, aeria	il photos, previo	us inspection	s), if availat	ole:			
Remarks:										
			rayfish r	nounds, muc	ky surface)				
			•	•	•					

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	Number of Dominant Species
1				that are OBL, FACW, or FAC: 5 (A)
2				Total Number of Dominant
3				Species Across all Strata: 5 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 100.00% (A/B)
6				(*=)
7				Prevalence Index Worksheet
8				Total % Cover of:
		= Total Cove		OBL species 23 x 1 = 23
50% of total cover:		of total cover		FACW species 61 x 2 = 122
Sapling/Shrub Stratun (Plot size: 15-m radius	1 20,00	or total cover		FAC species 8 x 3 = 24
1 Liquidambar styraciflua	5	Υ	FAC	FACU species 0 x 4 = 0
2 Quercus phellos	2	<u>'</u>	FACW	UPL species 0 x 5 = 0
3			TACVV	
4				Column totals 92 (A) 169 (B) Prevalence Index = B/A = 1.84
4				
5				Hydrophytic Vegetation Indicators:
0				1 - Rapid test for hydrophytic vegetation
				X 2 - Dominance test is >50%
8				X 3 - Prevalence index is ≤3.0*
		= Total Cove		4 - Morphogical adaptations* (provide
_	20% c	of total cover	r: 1.4	supporting data in Remarks or on a
Herb Stratum (Plot size: 1m²)			separate sheet)
1 Coleataenia rigidula	35	<u> </u>	FACW	Problematic hydrophytic vegetation*
2 Boehmeria cylindrica	20	Υ	FACW	(explain)
3 Rhynchospora corniculata	20	<u> </u>	OBL	*Indicators of hydric soil and wetland hydrology must be
4 Pluchea camphorata	3	N	FACW	present, unless disturbed or problematic
5 Ludwigia palustris	3	N	OBL	Definitions of Four Vegetation Strata:
6				
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8				or more in diameter at breast height (DBH),
9				regardless of height.
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12				equal to 3.28 ft (1 m) tall
12	- 04	- Total Cave		Herb – All herbaceous (non-woody) plants,
FOOV of total across 44		= Total Cove		
	0.5 20% d	of total cover	r: 16.2	regardless of size, and woody plants less than 3.28 ft tall
Woody Vine Stratum (Plot size: 15-m radius)			
1 Smilax rotundifolia	3	N	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Wisteria frutescens	1	<u>N</u>	FACW	in height.
3				
4				
5				
6				Hydrophytic
	4	Total Cove	er	vegetation
50% of total cover:	20% (of total cover	r: 0.8	present? Yes X No
				<u> </u>
Remarks: (Include photo numbers here or on a sepa	rate sheet)			1
tomanto. (moidue prioto numbers nere or on a separ	iaic siicel)			

Sampling Point:

Plot 28

Depth	Matrix	•		dox Feature		rm the absence of ind	·			
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 2	10YR 6/1	90	10YR 6/8	10	С	М	silty clay loam			
2 - 4	10YR 6/1	98	10YR 6/8	2	С	М	silty clay loam			
4 - 12	10YR 6/2	70	10YR 6/8	30	С	М	silty clay loam			
¹ Type: C =	Concentration, D = [Depletion, RN	/I = Reduced Matrix,	, MS = Mas	ked Sand	l Grains	. ² Location: PL = P	ore Lining, M = Matrix		
Hydric Soi	I Indicators:		Polyvalue Belo	w Surface (S8)		Indicators for Probler	matic Hydric Soils³:		
Histisol	(A1)		(LRR S, T, U)	(,	_	1 cm Muck (A10) (LRR O)		
Histic E	pipedon (A2)		Thin Dark Surfa	ace (S9) (L l	RR S, T,	U)	2 cm Muck (A10) (LRR S)		
Black F	listic (A3)		Loamy Mucky I	Mineral (F1)	(LRR O)	Reduced Vertic (F	18)		
<u> </u>			Loamy Gleyed	Matrix (F2)		-	(outside MLRA 15	50A, B)		
	ed Layers (A5)		X Depleted Matrix	` '			—— Piedmont Floodplain Soils (F19)			
			Redox Dark Su	, ,		-	(LRR P, S, T)			
			Depleted Dark	,	')		Anomalous Bright I	Loamy Soils (F20)		
			X Redox Depress	` '		-	(MLRA 153B)	. (== 40)		
	uck (A9) (LRR P. T)		Marl (F10) (LR l	-	DA 454\	-	Red Parent Materia	, ,		
	ed Below Dark Surfa	ce (A11)	Depleted Ochri		-	-	Very Shallow Dark Other (explain in re	· ·		
	ark Surface (A12)		Iron-Manganes	e Masses (F12)	emarks)				
	Prairie Redox (A16)		(LRR O, P, T)	(E12) (I D	D D T 11					
(MLRA	•		Umbric Surface Delta Ochric (F)				
Sandy (LRR C	Mucky Mineral (S1)		Reduced Vertic		-	150F	³ Indicators of hydro	ophytic vegetation		
— `	Gleyed Matrix (S4)						and weltand hydrol 9A) present, unless dis	logy must be		
	Redox (S5)		Anomalous Brig				present, unless disturbed or problematic			
	d Matrix (S6)		(MLRA 149A,)	'			
	urface (S7) (LRR P,	S, T, U)	`	•	•					
D 1-1-1-1		N -		1						
	Layer (if observed	1):								
Type:	es):			Hydric so	il nrasan	1 2	Yes X	No		
Deptil (illoli				liyanc so	ii preseri					
Remarks:					_					
			"m	ucky surfa	ce"					

Project/Site	Moro Creek Mitig	ation Bank	City/	/County:	Bunn/Cleve	eland S	Sampling Da	ate: 2018/09/18
Applicant/Owner:	Arkansas Dep	artment of T	ransportatio	on State:	AR	S	Sampling Po	oint: Plot 29
Investigator(s):	Kayti Ew	ring, Joe Led	Ivina	Sect	ion, Townshiր	p, Range:_		T8S R14W S24
Landform (hillslope	, terrace, etc.):	n	one	Local	relief (concav	/e, convex,	none):	none
Slope (%): 0	Lat:			Long:			Datum:	WGS84
Soil Map Unit Name	e	Wehadkee	silt loam		NWI (Classificatio	n:	PFO1A
Are climatic/hydrolo	ogic conditions of th	e site typical	for this time of	of the year?	∕es <u>X</u> N	0	(If no, ex	xplain in remarks)
Are vegetation	, soil	, or hydrolo	ogysig	nificantly dist	:urbed?	Are "norr	nal circums	stances" present?
Are vegetation	, soil	, or hydrolo	ogynat	urally proble	matic?		es X	
						*	-	any answers in Remarks.)
SUMMARY OF FI			owing sam	pling point	locations, to	ransects,	important	features, etc.
Hydrophytic vegeta	*	Yes X	No					
Hydric soil present?		Yes X	_ No	Is the sam	•			
Wetland hydrology	present?	Yes X	No	within a w	etland?	Yes_	X	No
Remarks: (Explain			·					
HYDROLOGY								
Wetland Hydrolog	· -					Secondary	Indicators	(minimum of two required)
Primary Indicators ((minimum of one is	required; che	ck all that ap	ply)		Surfa	ace Soil Crac	cks (B6)
Surface Water (A1)	_	_Aquatic Fau			Spars	sely Vegetat	ted Concave Surface (B8)
High Water Tabl	le (A2)	_	_Marl Depos	sits (B15) (LR	RU)	Drain	nage Pattern	s (B10)
Saturation (A3)		_	_Hydrogen Si	ulfide Odor (C	;1)	Moss	Trim Lines	(B16)
Water Marks (B	1)		Oxidized Rh	nizospheres or	ո Living	Dry-S	3eason Wate	er Table (C2)
Sediment Depos	sits (B2)	_	Roots (C3)			Crayf	fish Burrows	; (C8)
Drift Deposits (B	33)	_	Presence of	Reduced Iror	ı (C4)			e on Aerial Imagery (C9)
Algal Mat or Cru	ıst (B4)		Recent Iron	Reduction in	Tilled	X Geon	morphic Posi	ítion (D2)
Iron Deposits (B	55)	_	Soils (C6)				ow Aquitard	
Inundation Visib	le on Aerial Imagery	(B7)	Thin Muck S	surface (C7)			-Neutral Test	, ,
Water-Stained L	eaves (B9)		Other (Expla	ain in Remark	s)	Spha	gnum moss	(D8) (LRR T, U)
Field Observations	s:							
Surface water prese	ent? Yes	No	X Depth	(inches)		We	tland hydro	ology present?
Water table present	t? Yes	No	X Depth	(inches)				
Saturation present?	? Yes	No	X Depth	(inches)		Yes	X	No
(includes capillary f	ringe)							
Describe recorded	data (stream gauge	, monitoring	well, aerial ph	notos, previou	us inspection	s), if availal	ble:	
Remarks:								

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 29 **Dominance Test Worksheet** Absolute Dominant Indicator Tree Stratum (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** that are OBL, FACW, or FAC: **5** (A) **Total Number of Dominant** (B) Species Across all Strata: Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **11** x 1 = 20% of total cover: 50% of total cover: **FACW** species 45 x 2 =Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species **14** x 3 = 42 FACU species 32 1 Acer rubrum **FAC** x 4 = **FAC** 2 llex opaca UPL species x 5 = 0 Cephalanthus occidentalis 1 Ν **OBL** Column totals **78** (A) **175** (B) 3 Quercus phellos 1 Ν **FACW** Prevalence Index = B/A = 2.24 Liquidambar styraciflua **Hydrophytic Vegetation Indicators:** FAC 1 - Rapid test for hydrophytic vegetation X 2 - Dominance test is >50% X 3 - Prevalence index is ≤3.0* = Total Cover 4 - Morphogical adaptations* (provide 50% of total cover: 4.5 20% of total cover: 1.8 supporting data in Remarks or on a Herb Stratum (Plot size: separate sheet) Problematic hydrophytic vegetation* 1 Boehmeria cylindrica **FACW** (explain) Eupatorium capillifolium 8 **FACU** 2 Coleataenia rigidula 3 7 Ν **FACW** *Indicators of hydric soil and wetland hydrology must be Persicaria hydropiperoides 5 Ν OBL 4 present, unless disturbed or problematic 5 Rhexia mariana Ν **FACW Definitions of Four Vegetation Strata:** OBL 3 Ludwigia peploides Ν 6 7 Gratiola neglecta 2 Ν **OBL** Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), Panicum verrucosum 2 **FACW** regardless of height. Senecio hieraciifolius 2 **FAC** Sapling/Shrub - Woody plants, excluding 2 Ν 10 Cyperus sp. vines, less than 3 in. DBH and greater than or 11 equal to 3.28 ft (1 m) tall 12 = Total Cover Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: **13.2** Woody Vine Stratum (Plot size: 15-m radius) Smilax rotundifolia **FAC** Woody Vine – All woody vines greater than 3.28 ft **FAC** Vitis cinerea 3 4 5 **Hydrophytic** 5 = Total Cover vegetation Yes X No ____ 20% of total cover: 50% of total cover: 2.5 present? Remarks: (Include photo numbers here or on a separate sheet) Senecio hieraciifolius = Erechtites hieraciifolius

Depth (Inches) Color (n	4/2 98 5/2 98	Color (moist) 10YR 5/6 10YR 5/6 7.5YR 5/6	% 2 2 2	Type ¹ C C C	PL PL M	silty silty	clay loam clay loam clay loam	Remarks		
2 - 8 10YR 8 - 12 10YR	5/2 98	10YR 5/6	2	С	PL	silty	clay loam			
8 - 12 10YR						_	-			
	5/2 98	7.5YR 5/6	2	С	M	_	-			
Type: C = Concentration										
Type: C = Concentration										
Type: C = Concentratio										
Type: C = Concentration										
Type: C = Concentration										
Type: C = Concentration										
Type: C = Concentration										
	on, D = Depletion, R	M = Reduced Matrix,	MS = Mas	⊥ ked Sand	Grains.	² Lo	cation: PL =	Pore Lining, M = Matrix		
Hydric Soil Indicators	•	Polyvalue Belov						ematic Hydric Soils ³ :		
Histisol (A1)		(LRR S, T, U)	v Suriace (30)			Muck (A10)	=		
Histic Epipedon (A2	?)	Thin Dark Surfa	ce (S9) (L	RR S, T, I	J) _		Muck (A10)			
Black Histic (A3)		Loamy Mucky M	lineral (F1	(LRR O)	_	— Redu	ıced Vertic (F18)		
Hydrogen Sulfide (A	\ 4)	Loamy Gleyed N	Matrix (F2)				side MLRA	,		
Stratified Layers (A	5)	X Depleted Matrix	(F3)			— Piedi	Piedmont Floodplain Soils (F19)			
Organic Bodies (A6) (LRR P, T, U)	Redox Dark Sur	face (F6)		_		R P, S, T)	,		
5 cm Mucky Minera	I (A7) (LRR P, T, U)	Depleted Dark S	Surface (F	7)		 Anon	— Anomalous Bright Loamy Soils (F20)			
Muck Presence (A8) (LRR U) Redox Depre			ions (F8)		_	(MLF	RA 153B)	, , ,		
1 cm Muck (A9) (LF	RR P. T)	Marl (F10) (LRF	R U)		_	Red	Parent Mate	rial (TF12)		
Depleted Below Da	rk Surface (A11)	Depleted Ochric	(F11) (MI	RA 151)	_	Very	Shallow Dai	rk Surface (TF12)		
Thick Dark Surface	(A12)	Iron-Manganese	e Masses (F12)	_	Othe	r (explain in	remarks)		
Coast Prairie Redo	x (A16)	(LRR O, P, T)								
(MLRA 150A)		Umbric Surface		-						
Sandy Mucky Mine	ral (S1)	Delta Ochric (F1		-		3India	³ Indicators of hydrophytic vegetation			
(LRR O, S)		Reduced Vertic				and weltand hydrology must be (A) present, unless disturbed or				
Sandy Gleyed Matr	ix (S4)	Piedmont Flood	plain Soils	(F19) (M I	_RA 149					
Sandy Redox (S5)		Anomalous Brig)	probl	ematic			
Stripped Matrix (S6		(MLRA 149A, 1	53C, 153L))						
Dark Surface (S7) (LRR P, S, I, U)									
Restrictive Layer (if o	oserved):									
Гуре:										
Depth (inches):			Hydric so	il presen	t?	Yes	X	No		
Remarks:										

Project/Site	Moro Creek	Mitigation Ba	ank	City/	County:	Bunn	Sampling Date	e: 2018/09/18		
Applicant/Owner:	Arkansas	Department	t of Tra	nsportatio	n State:	AR	Sampling Poir	nt: Plot 30		
Investigator(s):	Kay	rti Ewing, Joe	e Ledvi	na	Section, Township, Range: T8S R14W S24					
Landform (hillslope	, terrace, etc.)	:	non	1e	Local relief	f (concave, c	convex, none):	none		
Slope (%): 0	Lat:				Long:		Datum:	WGS84		
Soil Map Unit Name	e	Weha	dkee si	It Ioam		NWI Clas	sification:	PFO1A		
Are climatic/hydrolo	ogic conditions	of the site ty	pical for	r this time o	of the year? Yes	X No	(If no, exp	olain in remarks)		
Are vegetation	, soil	, or hy	ydrology	/sign	nificantly disturbe	ed? A	re "normal circumsta	nces" present?		
Are vegetation	, soil	, or hy	ydrology	/nat	urally problemation	c?	Yes X	No		
						(1	f needed, explain an	y answers in Remarks.)		
SUMMARY OF FI	NDINGS - At	tach site ma	ıp shov	ving sam	oling point loca	tions, tran	sects, important fe	atures, etc.		
Hydrophytic vegeta	tion present?	Yes_	X	No						
Hydric soil present?	?	Yes_		No X	Is the sampled					
Wetland hydrology	present?	Yes_	X	No	within a wetlar	nd?	Yes	No X		
Remarks: (Explain	alternative pro	cedures here	or in a	separate re	eport.)					
HYDROLOGY										
Wetland Hydrolog	y Indicators:					Sec	condary Indicators (m	ninimum of two required)		
Primary Indicators (minimum of one is required; check all that app				ply)	_	Surface Soil Cracks (B6)				
Surface Water (A1) Aquatic Fauna				na (B13)		Sparsely Vegetated	d Concave Surface (B8)			
High Water Tab	le (A2)		N	∕larl Deposi	its (B15) (LRR U))	Drainage Patterns	(B10)		
Saturation (A3)				Hydrogen Sı	ulfide Odor (C1)		Moss Trim Lines (E	316)		
Water Marks (B	Water Marks (B1) Oxidized Rhizospheres on Living					ina —	 Dry-Season Water	Table (C2)		
Sediment Depos	sits (B2)			Roots (C3)	izospiioros on zivi	9 <u>—</u>	Crayfish Burrows (C8)		
Drift Deposits (E	33)		F	resence of	Reduced Iron (C4	4) Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Cru	ıst (B4)			Pecent Iron	Reduction in Tilled X Geomorphic Position (D2)					
Iron Deposits (B	55)			Soils (C6)	rreduction in Tillet	D3)				
Inundation Visib	le on Aerial Im	agery (B7)	т	hin Muck S	Surface (C7) X FAC-Neutral Test (D5)					
Water-Stained L	eaves (B9)			Other (Expla	ain in Remarks) —— Sphagnum			D8) (LRR T, U)		
Field Observation						_				
Field Observation Surface water pres			No	X Depth	(inches)		Wetland hydrol	ogy procent?		
Water table presen				X Depth	· -		vvetiana nyuron	ogy present?		
Saturation present?			No _	X Depth			Yes X	No		
(includes capillary f		·	NO _	Deptil	(IIICHES)	,	Yes X	No		
Describe recorded	<u> </u>	nougo monito	ring wo	ll gorial ph	otos provious in	enactions) i	f available:			
Describe recorded	data (Stream g	jauge, monito	ning we	ii, aciiai pii	iotos, previous iri	эреспонз <i>)</i> , г	i avallable.			
Remarks:										
remans.										

	Dominant Species	Indicator Staus	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: 6 (A) Total Number of Dominant Species Across all Strata: 7 (B) Percent of Dominant Species that are OBL, FACW, or FAC: 85.71% (A/B)
		Staus	that are OBL, FACW, or FAC: 6 (A) Total Number of Dominant Species Across all Strata: 7 (B) Percent of Dominant Species
	Total Cover		Species Across all Strata: (B) Percent of Dominant Species
	Total Cover		Percent of Dominant Species
	Total Cover		
	Total Cover		1
	Total Cover		Prevalence Index Worksheet
	Total Cover		Total % Cover of:
20% с			OBL species <u>4</u> x 1 = <u>4</u>
	of total cover:		FACW species 127 x 2 = 254
	.,		FAC species 21 x 3 = 63
15	<u>Y</u>	FACW	FACU species 6 x 4 = 24
12	<u>Y</u>	FAC	UPL species 0 x 5 = 0
5			Column totals 158 (A) 345 (B)
2	<u>N</u>	FACW	Prevalence Index = B/A = 2.18
1	<u>N</u>	OBL	Hydrophytic Vegetation Indicators:
			1 - Rapid test for hydrophytic vegetation
			X 2 - Dominance test is >50%
			X 3 - Prevalence index is ≤3.0*
			4 - Morphogical adaptations* (provide
20% o	f total cover:	<u> </u>	supporting data in Remarks or on a
			separate sheet)
65	Υ	FACW	Problematic hydrophytic vegetation*
25	Υ	FACW	(explain)
20	N	FACW	*Indicators of hydric soil and wetland hydrology must be
3	N	OBL	present, unless disturbed or problematic
2	N	FACU	Definitions of Four Vegetation Strata:
1	N	FACU	
<u> </u>			Tree – Woody plants, excluding vines, 3 in. (7.6 cn
			or more in diameter at breast height (DBH),
			regardless of height.
			Sapling/Shrub – Woody plants, excluding
			vines, less than 3 in. DBH and greater than or
			equal to 3.28 ft (1 m) tall
116 =	- Total Cove		Herb – All herbaceous (non-woody) plants,
			regardless of size, and woody plants less than 3.28
2010 -	I WIGHT GC		ft tall
2	v	EACH	Woody Vine – All woody vines greater than 3.28 f
2			in height.
			in neight.
		FAU	
 ,	T-tal Cove		Hydrophytic
			vegetation
20% 0	total cover.	1.4	present? Yes X No
3 6 2 2 : : : : : : : : : : : : : : : : :	2 1 1 35 = 20% of 55 225 200 3 2 1 1 = 20% of 3 2 2 = 2	2 N 1 N 35 = Total Cover 20% of total cover: 65 Y 26 N 3 N 2 N 1 N 16 = Total Cover 20% of total cover: 3 Y 2 Y 2 Y 7 = Total Cover 20% of total cover:	2

Profile Des	cription: (Describe	to the dept	h needed to docun	nent the inc	dicator o	r confi	irm the absence of ind	icators.)		
Depth	Matrix		Red	ox Features	3					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 12	10YR 3/3						silty clay loam			
¹ Type: C = 0	Concentration, D = D	epletion, RM	1 = Reduced Matrix,	MS = Mask	ed Sand	Grains	s. ² Location: PL = Po	ore Lining, M = Matrix		
Hydric Soil	Indicators:		Polyvalue Belov	v Surface (S8)		Indicators for Problem	natic Hydric Soils³:		
Histisol	(A1)		(LRR S, T, U)				1 cm Muck (A10) (I	LRR O)		
Histic E	pipedon (A2)		Thin Dark Surfa				2 cm Muck (A10) (I	LRR S)		
	istic (A3)	-	Loamy Mucky N	` '	(LRR O))	Reduced Vertic (F1	•		
	en Sulfide (A4)	•	Loamy Gleyed I	Matrix (F2)			(outside MLRA 15	0A, B)		
	d Layers (A5)		Depleted Matrix	` '				Piedmont Floodplain Soils (F19)		
	Bodies (A6) (LRR P	•	Redox Dark Sur				(LRR P, S, T)			
5 cm M	Surface (F7)		Anomalous Bright I	₋oamy Soils (F20)					
Muck P	ions (F8)		•	(MLRA 153B)	N (TE40)					
1 cm M	R U)	DA 151\	·	Red Parent Materia						
Depleted Below Dark Surface (A11) Depleted Ochri Thick Dark Surface (A12) Iron-Manganes							Very Shallow Dark Other (explain in re	·		
	e Masses (F	-12)	,	Other (explain in re	iliaiks)					
(MLRA	Prairie Redox (A16)	•	(LRR O, P, T) Umbric Surface	(F13) (I RE	RP. T. U	١				
		•	Delta Ochric (F		-	'				
(LRR O	Mucky Mineral (S1)	•	Reduced Vertic		-	. 150E		³ Indicators of hydrophytic vegetation		
	Gleyed Matrix (S4)	•	—— Piedmont Flood				and weltand hydrology must be (A) present, unless disturbed or problematic			
	Redox (S5)	•	—— Anomalous Brig							
Strippe	d Matrix (S6)		(MLRA 149A, 1			·)				
Dark Su	urface (S7) (LRR P, S	S, T, U)								
Destriction	Language (Contraction of the Contraction of the Con									
	Layer (if observed)):								
Type: Depth (inch	ec).			Hydric soi	l nrasan	1 2	Yes	No X		
Deptil (illeli				riyane soi	i presen	••		<u> </u>		
Remarks:										

Project/Site	Moro Creek Mitig	Creek Mitigation Bank City/Co		ity/County:	Bunn	Sa	mpling Da	ite: 2018/09/18	
Applicant/Owner:	Arkansas Dep	partment of	Transporta	tion State:	AR	Sar	mpling Poi	int: Plot 31	
Investigator(s):	Kayti Ev	wing, Joe Le	dvina	Section	Section, Township, Range:			T8S R14W S24	
Landform (hillslope	, terrace, etc.):		none	Local re	lief (concave,	convex, no	one):	none	
Slope (%): 0	Lat:			Long:		Da	ıtum:	WGS84	
Soil Map Unit Name	e	Wehadke	e silt loam		NWI Cla	assification:	:	PFO1A	
Are climatic/hydrolo	=						(If no, ex	plain in remarks)	
Are vegetation				significantly distu				ances" present?	
Are vegetation	, soil	, or hydro	ologyr	naturally problem			s <u>X</u>	No	
		_	_					ny answers in Remarks.)	
SUMMARY OF FI				mpling point to	cations, trai	nsects, im	iportant 1	eatures, etc.	
Hydrophytic vegeta	-	Yes X		_					
Hydric soil present?		Yes X		Is the samp		Vac	v		
Wetland hydrology	-	Yes X	No	within a wet	lland?	Yes	<u> </u>	No	
Remarks: (Explain	alternative procedu	ures here or	in a separat	e report.)					
HYDROLOGY									
Wetland Hydrolog	-				Se	=	-	minimum of two required)	
Primary Indicators ((minimum ot one ıs	required; ch	eck all that	apply)	-		e Soil Cracl		
Surface Water (A1)	_		auna (B13)	-			ed Concave Surface (B8)	
High Water Tabl	le (A2)	_	Marl Dep	oosits (B15) (LRR	. U) _	Drainage Patterns (B10)			
Saturation (A3)		_	Hydrogen	Sulfide Odor (C1	_	Moss T	rim Lines (B16)	
Water Marks (B	1)		Oxidized	Rhizospheres on I	Living _	Dry-Sea	ason Wate	r Table (C2)	
Sediment Depos		_	Roots (C3		Crayfish Burrows (C8)				
X Drift Deposits (B	-	_	Presence	of Reduced Iron (
Algal Mat or Cru					n Reduction in Tilled X Geomorphic Position (D2)				
Iron Deposits (B		. –	Soils (C6)	,			v Aquitard (
	le on Aerial Imagery	/ (B7) _		hin Muck Surface (C7)		FAC-Neutral Test (D5)			
Water-Stained L	.eaves (B9)	=	Other (Ex	(plain in Remarks)		Sphagn	ium moss ((D8) (LRR T, U)	
Field Observations	s:								
Surface water prese	ent? Yes _	No	X Dep	oth (inches)		Wetla	ınd hydro	logy present?	
Water table present	t? Yes	No	X Dep	oth (inches)	_				
Saturation present?	Yes _	No	X Dep	oth (inches)	_	Yes	X	No	
(includes capillary f	ringe)								
Describe recorded	data (stream gauge	e, monitorinç	y well, aerial	photos, previous	inspections),	, if available	e:		
Remarks:									

 VEGETATION -- Use scientific names of plants.
 Sampling Point:

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	Number of Dominant Species
1 Liquidambar styraciflua	90	Υ	FAC	that are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across all Strata: 4 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 75.00% (A/B)
6				`` ` /
7				Prevalence Index Worksheet
8				Total % Cover of:
	90	Total Cove	er	OBL species 0 x 1 = 0
50% of total cover: 4		of total cover		FACW species $0 \times 2 = 0$
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 184 x 3 = 552
1 Liquidambar styraciflua	[′] 60	Υ	FAC	FACU species 3 x 4 = 12
2 Carpinus caroliniana	12		FAC	UPL species
3 Ilex opaca	10		FAC	Column totals 187 (A) 564 (B)
A IIEX OPACA			1 AC	Prevalence Index = B/A = 3.02
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
				X 2 - Dominance test is >50%
8				3 - Prevalence index is ≤3.0*
		Total Cove		4 - Morphogical adaptations* (provide
	20% c	of total cover	r: 16.4	supporting data in Remarks or on a
Herb Stratum (Plot size: 1m²)			separate sheet)
1 Carex sp.	3	N		Problematic hydrophytic vegetation*
2				(explain)
3				*Indicators of hydric soil and wetland hydrology must be
4				present, unless disturbed or problematic
5				Definitions of Four Vegetation Strata:
6				
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8				or more in diameter at breast height (DBH),
9				regardless of height.
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12				equal to 3.28 ft (1 m) tall
	3	Total Cove		Herb – All herbaceous (non-woody) plants,
50% of total cover: 1		of total cover		regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius	1 2070 0	i total oovol		ft tall
1 Vitis rotundifolia	, 10	Υ	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Lonicera japonica	3	<u>'</u>	FACU	in height.
3 Bignonia capreolata	1		FAC	iii neight.
4 Berchemia scandens	1	N	FAC	
5				
6				Hydrophytic
		Total Cove		vegetation
50% of total cover: 7	.5 20% c	of total cover	r: 3	present? Yes X No
Remarks: (Include photo numbers here or on a separ	ate sheet)			

Plot 31

Profile Des	cription: (Describe	to the depth	n needed to docum	ent the in	dicator o	r confi	rm the absence of ind	icators.)		
Depth	Matrix		Redo	ox Feature:	3					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 6	10YR 4/2	90	10YR 3/6	2	С	M	silty clay loam			
			10YR 5/2	10	D	PL				
6 - 12	10YR 4/2	49	10YR 3/6	2	С	М	silty clay loam			
	10YR 5/2	49								
¹ Type: C = 0	Concentration, D = D	epletion, RM	= Reduced Matrix,	MS = Masł	ed Sand	Grains	s. ² Location: PL = Po	ore Lining, M = Matrix		
Hydric Soil	Indicators:		Polyvalue Below	/ Surface (S8)		Indicators for Problem	natic Hydric Soils³:		
Histisol	(A1)	=	(LRR S, T, U)				1 cm Muck (A10) (I			
_	pipedon (A2)	_	Thin Dark Surfac				2 cm Muck (A10) (I	LRR S)		
	istic (A3)	_	Loamy Mucky M		(LRR O)		Reduced Vertic (F1			
─ ' '	en Sulfide (A4)	=	Loamy Gleyed N	, ,		-	(outside MLRA 15	0A, B)		
	d Layers (A5)		X Depleted Matrix	` '			Piedmont Floodpla	in Soils (F19)		
	Bodies (A6) (LRR P	_	Redox Dark Sur		`	-	(LRR P, S, T)			
	ucky Mineral (A7) (L l resence (A8) (LRR L	· -	Depleted Dark S	· ·)		Anomalous Bright I (MLRA 153B)	₋oamy Soils (F20)		
	uck (A9) (LRR P. T)	·) _	Redox Depressi Marl (F10) (LRR	` '		-	Red Parent Materia	ol (TE12)		
Deplete	Depleted Ochric	•	RA 151)	-	Very Shallow Dark					
Thick D			-	-	Other (explain in re	·				
			Iron-Manganese (LRR O, P, T)	e iviasses (i	-12)	•		marko)		
(MLRA	Prairie Redox (A16) 150A)	_	Umbric Surface	(F13) (LRF	R P, T, U)					
	, Mucky Mineral (S1)	-	— Delta Ochric (F1				_			
(LRR O		=	Reduced Vertic		-	150E		³ Indicators of hydrophytic vegetation and weltand hydrology must be A) present, unless disturbed or		
Sandy (Gleyed Matrix (S4)	_	Piedmont Flood	plain Soils	(F19) (M I	LRA 14	and welland nydrol (I9A) present, unless dis			
Sandy F	Redox (S5)	_	— Anomalous Brigl				problematic			
Stripped	d Matrix (S6)	_	(MLRA 149A, 1	-		,				
Dark Sເ	ırface (S7) (LRR P, S	S, T, U)								
Restrictive	Layer (if observed)	\•	T							
Туре:	_ayo. (oboo. roa)	, <u>.</u>								
Depth (inch	es):			Hydric soi	l presen	t?	Yes X	No		
	-									
Remarks:										

Project/Site	roject/Site Moro Creek Mitigation Bank City/C			/County: Bunn		Sampling Date:		2018/09/18	
Applicant/Owner:	Arkansas De	partment of	Transportatio	on State:	AR	Samplin	g Point:	Plot 32	
Investigator(s):	nvestigator(s): Kayti Ewing, Joe Ledvina			Section,	Township, Ra	nge:	T8S R	14W S24	
Landform (hillslope	e, terrace, etc.):	l	none	Local relief	(concave, co	nvex, none):		none	
Slope (%): 0	Lat:			Long:		Datum:		WGS84	
Soil Map Unit Nam	ie	Wehadke	e silt loam		NWI Classi	fication:	l	PFO1A	
Are climatic/hydrole	_			-		(If n	o, explain i	in remarks)	
Are vegetation						"normal circ	umstances	s" present?	
Are vegetation	, soil	, or hydrol	ogynat	urally problemation		Yes			
		_			•		•	swers in Remarks.)	
SUMMARY OF F				pling point loca	tions, transe	ects, import	ant featur	res, etc.	
Hydrophytic vegeta	· ·	Yes X	No						
Hydric soil present		Yes X	No	Is the sampled					
Wetland hydrology	present?	Yes X	No	within a wetlar	1d?	Yes X	No	o	
Remarks: (Explain	Remarks: (Explain alternative procedures here or in a separate report.)								
HYDROLOGY									
Wetland Hydrolog	gy Indicators:				Seco	ndary Indica	tors (minim	um of two required)	
Primary Indicators	(minimum of one i	s required; ch	eck all that ap	ply)		Surface Soil	•		
Surface Water ((A1)		Aquatic Fau	na (B13)		-		ncave Surface (B8)	
				its (B15) (LRR U))	Drainage Pa			
Saturation (A3)				ulfide Odor (C1)		Moss Trim L		,	
Matau Maula (D4)				izospheres on Livi	na	Dry-Season		e (C2)	
Sediment Deposits (B2) Roots (C3)			izospilerės ori Livi		Crayfish Bur		,		
X Drift Deposits (E	B3)		Presence of	f Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9)					
Algal Mat or Cru	ust (B4)		Recent Iron	Reduction in Tilled X Geomorphic Position (D2)					
Iron Deposits (E	35)		Soils (C6)	Shallow Aquitard (D3)					
Inundation Visit	ole on Aerial Imager	ry (B7)	Thin Muck S	Surface (C7) FAC-Neutral Test (D5)					
X Water-Stained I	Leaves (B9)	_	Other (Expla	lain in Remarks) Sphagnum moss (D8) (LRR T, U)					
Field Observation	ns:								
Surface water pres	_	No	X Depth	(inches)		Wetland h	vdroloav i	present?	
Water table presen	-	No	X Depth	· · ·			,		
Saturation present	-	No	X Depth		Y	es X	No		
(includes capillary	fringe)			· -					
Describe recorded		ge, monitoring	well, aerial ph	notos, previous in:	spections), if a	available:			
Remarks:									

VEGETATION -- Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	
		•		Number of Dominant Species
1 Liquidambar styraciflua	80	<u> </u>	FAC	that are OBL, FACW, or FAC:4 (A)
2 Carpinus caroliniana	10	N	FAC	Total Number of Dominant
3				Species Across all Strata: (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 100.00% (A/B)
6				
7	· ——			Prevalence Index Worksheet
0	·			
8				Total % Cover of:
		= Total Cove		OBL species x 1 = 0
50% of total cover:	45 20% c	of total cover	r: 18	FACW species 0 x 2 = 0
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 181 x 3 = 543
1 Liquidambar styraciflua	60	Υ	FAC	FACU species 0 x 4 = 0
2 Carpinus caroliniana	10		FAC	UPL species 0 x 5 = 0
3 Quercus nigra	1		FAC	Column totals 181 (A) 543 (B)
4 Quercus Ingra	'		170	``
4				
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				X 3 - Prevalence index is ≤3.0*
	71	Total Cove		A Manufaction of Constitution of Constitution
50% of total cover: 3		of total cover		4 - Morphogical adaptations* (provide
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	or total cover	17.2	supporting data in Remarks or on a
	.)			separate sheet)
1 Carex sp.	1	<u>N</u>		Problematic hydrophytic vegetation*
2				(explain)
3				*Indicators of hydric soil and wetland hydrology must be
4	· <u></u>			present, unless disturbed or problematic
5				Definitions of Four Vegetation Strata:
6				
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
	· ——			or more in diameter at breast height (DBH),
8				3 · · · //
9				regardless of height.
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12				equal to 3.28 ft (1 m) tall
	1 :	Total Cove		Herb – All herbaceous (non-woody) plants,
50% of total cover:		of total cover		regardless of size, and woody plants less than 3.28
	2070 0	or total cover		ft tall
` =	,			
1 Vitis cinerea	10	<u> </u>	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Smilax rotundifolia	5	<u> </u>	FAC	in height.
3 Berchemia scandens	3	N	FAC	
4 Smilax glauca	2	N	FAC	
5	·			
6				
	- 20	- Total Cova		Hydrophytic
		= Total Cove		vegetation
50% of total cover:	10 20% c	of total cover	r: 4	present? Yes X No
Remarks: (Include photo numbers here or on a sepa	rate sheet)			

Sampling Point: Plot 32

Profile Des	cription: (Describe	to the depti	n needed to docum	ent the in	dicator o	r confi	rm the absence of inc	dicators.)		
Depth	Matrix		Redo	ox Feature:	S					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 2	10YR 5/2	98	10YR 5/6	2	С	M	silty clay loam			
2 - 10	10YR 5/2	80	10YR 5/8	20	С	PL	silty clay loam			
10 - 12	10YR 5/2	95	10YR 5/8	5	С	silty clay loam				
¹ Type: C = 0	Concentration, D = D	epletion, RM	= Reduced Matrix,	MS = Mask	ked Sand	Grains	. ² Location: PL = P	Pore Lining, M = Matrix		
Hydric Soil	Indicators:		Polyvalue Below	v Surface (S8)		Indicators for Proble	matic Hydric Soils ³ :		
Histisol	` '	-	(LRR S, T, U)				1 cm Muck (A10) (•		
_	pipedon (A2)	-	Thin Dark Surfa				2 cm Muck (A10) (LRR S)		
	istic (A3)	-	Loamy Mucky M		(LRR O)		Reduced Vertic (F	•		
	en Sulfide (A4)	=	Loamy Gleyed N	` '		-	(outside MLRA 1	50A, B)		
	d Layers (A5)		X Depleted Matrix	` '			Piedmont Floodpla	in Soils (F19)		
	Bodies (A6) (LRR P	-	Redox Dark Sur		·\	-	 `	_(LRR P, S, T)		
	ucky Mineral (A7) (L l resence (A8) (LRR l	· · · · · · · -	Depleted Dark S Redox Depressi	· ·)		Anomalous Bright (MLRA 153B)	Loamy Soils (F20)		
	uck (A9) (LRR P. T)	·) _	Marl (F10) (LRR	` '		-	Red Parent Materi	al (TE12)		
_	Depleted Ochric	•	RA 151)	-	Very Shallow Dark					
Third Dark Courters (A40)					-	-	Other (explain in re	· ·		
			Iron-Manganese (LRR O, P, T)	e Masses (r	-12)	•	Outlook (explain in the	sindino)		
(MLRA	Prairie Redox (A16) 150A)	=	Umbric Surface	(F13) (LRF	R P. T. U)					
	, Mucky Mineral (S1)	-	— Delta Ochric (F1							
(LRR O		=	Reduced Vertic		-	150E		³ Indicators of hydrophytic vegetation and weltand hydrology must be A) present, unless disturbed or		
Sandy (Gleyed Matrix (S4)	-	Piedmont Flood	plain Soils	(F19) (M I	_RA 14	and weitand nydro (9 A) present, unless dis			
Sandy F	Redox (S5)	-	Anomalous Brig				problematic			
Stripped	d Matrix (S6)	<u>-</u>	(MLRA 149A, 1	-		,				
Dark Sເ	ırface (S7) (LRR P, S	S, T, U)								
Restrictive	Layer (if observed)	\•								
Type:	Layer (ii observed)	, <u>.</u>								
Depth (inch	es):		_	Hydric soi	il presen	t?	Yes X	No		
	, <u> </u>		_		<u>. </u>					
Remarks:										

Project/Site	Moro Creek Mitig	k Mitigation Bank City/Co		y/County:	Bunn	Sampling D	Date: 2018/09/18		
Applicant/Owner:	Arkansas De	partment of T	Γransportati	on State:	AR	Sampling P	Point: Plot 33		
Investigator(s):	Kayti E	wing, Joe Led	dvina	Section	າ, Township, R	Range:	T8S R14W S24		
Landform (hillslope	, terrace, etc.):	n	none	Local rel	Local relief (concave, convex,		none		
Slope (%):0	Lat:			Long:		Datum:	WGS84		
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Clas	ssification:	PFO1A		
Are climatic/hydrolo	=			-		(If no, e	explain in remarks)		
Are vegetation				gnificantly distur			stances" present?		
Are vegetation	, soil	, or hydrolo	ogyna	aturally problema		Yes X			
			_				any answers in Remarks.)		
SUMMARY OF FI				ipling point lo	cations, tran	sects, importan	t features, etc.		
Hydrophytic vegeta	-	Yes X	No	4					
Hydric soil present		Yes X	_ No	Is the sampl					
Wetland hydrology	•	Yes	NoX_	within a wet	land?	Yes	NoX		
Remarks: (Explain	allernative proces	ules here of in	Ι α συματαίο ι	т еро ги <i>,</i>					
HYDROLOGY									
Wetland Hydrolog					Sec	condary Indicators	s (minimum of two required)		
Primary Indicators (minimum of one is required; check all that appl				pply)	_	Surface Soil Cra	acks (B6)		
Surface Water (A1) Aquatic Fauna			una (B13)	_	Sparsely Vegeta	ated Concave Surface (B8)			
High Water Tab	le (A2)	_	Marl Depos	sits (B15) (LRR	U) _	Drainage Patter	ns (B10)		
Saturation (A3)		_	Hydrogen S	Sulfide Odor (C1)	<u> </u>	Moss Trim Lines	s (B16)		
Water Marks (B	1)		Oxidized R	hizospheres on L	_iving	Dry-Season Wa	iter Table (C2)		
Sediment Depos	sits (B2)	_	Roots (C3)		_	Crayfish Burrow	· ·		
Drift Deposits (E	33)	_	Presence of	of Reduced Iron (C4)	Saturation Visib	le on Aerial Imagery (C9)		
Algal Mat or Cru			Recent Iron	າ Reduction in Til	Reduction in Tilled X Geomorphic Position (D2)				
Iron Deposits (B		_	Soils (C6)	Shallow Aquitard (D3)					
	ole on Aerial Imager	y (B7)	_ Thin Muck S	Thin Muck Surface (C7)		FAC-Neutral Test (D5)			
Water-Stained L	_eaves (B9)		Other (Expl	lain in Remarks)		Sphagnum mos	phagnum moss (D8) (LRR T, U)		
Field Observation	is:								
Surface water pres	ent? Yes _	No	X Depth	n (inches)		Wetland hydi	rology present?		
Water table presen	nt? Yes	No	X Depth	n (inches)	_				
Saturation present?	? Yes _	No No	X Depth	ı (inches)	_	Yes	No X		
(includes capillary f	fringe)					_			
Describe recorded	data (stream gaug	je, monitoring	well, aerial p	hotos, previous	inspections), i	f available:			
Remarks:									
Nemans.									

	Absolute	Dominant	Indicator	Dominance Test Worksheet		
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	Number of Dominant Species		
1				that are OBL, FACW, or FAC: 4 (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: 66.67% (A/B)		
6				(***)		
7				Prevalence Index Worksheet		
8				Total % Cover of:		
	 :	= Total Cove		OBL species 0 x 1 = 0		
50% of total cover:		of total cove		FACW species 13 x 2 = 26		
Sapling/Shrub Stratun (Plot size: 15-m radius			·	FAC species 37 x 3 = 111		
1 Quercus phellos	12	Υ	FACW	FACU species 11 x 4 = 44		
2 Liquidambar styraciflua	6	<u>'</u>	FAC	UPL species 0 x 5 = 0		
3 Baccharis halimifolia	5	<u>'</u>	FAC	Column totals 61 (A) 181 (B)		
	1	N	FACU	Prevalence Index = B/A = 2.97		
- Cambarpa amorroana			FACU			
5				Hydrophytic Vegetation Indicators:		
6				1 - Rapid test for hydrophytic vegetation		
				X 2 - Dominance test is >50%		
8				3 - Prevalence index is ≤3.0*		
500/51-1-1		= Total Cove		4 - Morphogical adaptations* (provide		
· —	1 2 20% c	of total cove	r: 4.8	supporting data in Remarks or on a		
Herb Stratum (Plot size: 1m²)			separate sheet)		
1 Callicarpa americana	10	<u> </u>	FACU	Problematic hydrophytic vegetation*		
2 Chasmanthium laxum	1	N	FACW	(explain)		
3				*Indicators of hydric soil and wetland hydrology must be		
4				present, unless disturbed or problematic		
5				Definitions of Four Vegetation Strata:		
6						
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)		
8				or more in diameter at breast height (DBH),		
9				regardless of height.		
10				Sapling/Shrub – Woody plants, excluding		
11				vines, less than 3 in. DBH and greater than or		
12				equal to 3.28 ft (1 m) tall		
	11 :	= Total Cove	er	Herb – All herbaceous (non-woody) plants,		
50% of total cover:	5. 5 20% c	of total cove	r: 2.2	regardless of size, and woody plants less than 3.28		
Woody Vine Stratum (Plot size: 15-m radius)			ft tall		
1 Rubus laudatus	45	Υ		Woody Vine – All woody vines greater than 3.28 ft		
2 Vitis rotundifolia	15	Υ	FAC	in height.		
3 Vitis cinerea	5	N	FAC			
4 Smilax rotundifolia	3	N	FAC			
5 Toxicodendron radicans	3		FAC			
6	<u> </u>			Headan about a		
	71	Total Cove		Hydrophytic		
50% of total cover: 3		of total cove		vegetation present? Yes X No		
30 % of total cover.	20%	n total cove	14.2	present: res X No		
Pamarka: (Include photo numbers here or an a cone	rata chaot)					
Remarks: (Include photo numbers here or on a sepa	iale sileel)					

Sampling Point: Plot 33

	scription: (Describe	-				r confir	m the a	bsence of	indicators.)		
Depth			Redox Features						5		
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Texture	Remarks		
0 - 9	10YR 3/3	98	10YR 3/6	2	С	M	silty	clay loam			
9 - 12	10YR 3/2	59	10YR 6/8	2	С	M	silty	clay loam	ı		
			10YR 6/1	39	D	M			<4", so not F7		
T	0	DI-# DM	_ D. d d Matrix	MC = M	l d. O d	0	21 -	DI			
	Concentration, D = [Depletion, Rivi	= Reduced Matrix,	MS = Mas	ked Sand				= Pore Lining, M = Matrix		
-	I Indicators:		Polyvalue Belov	w Surface	(S8)	I			olematic Hydric Soils ³ :		
Histisol	•	_	(LRR S, T, U)			_	_	•	0) (LRR O)		
_	Epipedon (A2)	ace (S9) (L		_	2 cm	Muck (A10	0) (LRR S)				
_	listic (A3)	Mineral (F1) (LRR 0))		iced Vertic					
Hydrog	en Sulfide (A4)	Loamy Gleyed	Matrix (F2)		_	(out	side MLRA	150A, B)			
Stratifie	ed Layers (A5)	Depleted Matrix	k (F3)		lplain Soils (F19)						
Organio	Bodies (A6) (LRR I	Redox Dark Su	·								
5 cm M	lucky Mineral (A7) (L	Depleted Dark	Surface (F	7)		Anor	– Anomalous Bright Loamy Soils (F20)				
Muck P	sions (F8)				RA 153B) Š	, , , , , , , , , , , , , , , , , , , ,					
1 cm M	R U)		_	Red	Parent Mat	terial (TF12)					
Depleted Below Dark Surface (A11) Depleted Ochr				c (F11) (M I	_RA 151)	_	 Very	Shallow D	ark Surface (TF12)		
	ark Surface (A12)	` ′ _	— Iron-Manganes		-	_			n remarks)		
			(LRR O, P, T)	c Masses	1 12)	_		\ 1	,		
(MLRA	Prairie Redox (A16)	_	Umbric Surface	(F13) (I R	RP.T.U	1					
	-	_	Delta Ochric (F			•					
(LRR C	Mucky Mineral (S1)	_	Reduced Vertic		-	1505	³ Indi	³ Indicators of hydrophytic vegetation			
	•	_					and	and weltand hydrology must be present, unless disturbed or			
	Gleyed Matrix (S4)	_							disturbed or		
	Redox (S5)		Anomalous Brig))	prob	lematic			
	d Matrix (S6)		(MLRA 149A, 1	153C, 153L))						
Dark Si	urface (S7) (LRR P,	S, T, U)									
Restrictive	Layer (if observed	l):									
уре:		•									
Depth (inch				Hydric so	il presen	t?	Yes	X	No		
	,				•		_				
Remarks:											
		Disturbed so	ils, due to the log	ging opera	itions tha	t occuri	red on t	he site.			

Project/Site	Moro Creek Mitigation Bank City/C			ty/County:	ınty: Bunn S		Sampling Date: 2018/09			
Applicant/Owner:	Arkansas Dep	Arkansas Department of Transportation			AR	Sam	pling Point:	Plot 34		
Investigator(s):	Kayti Ev	wing, Joe Led	lvina	Section	n, Township,	Range:	T8S	R14W S24		
Landform (hillslope	e, terrace, etc.):	n	none	Local re	lief (concave,	convex, non	ıe):	none		
Slope (%): 0	Lat:			Long:		Datu	ım:	WGS84		
Soil Map Unit Nam	ıe	Wehadkee	silt loam		NWI Cla	assification:		PFO1A		
Are climatic/hydrological	ogic conditions of th	ne site typical	for this time	of the year? Ye	s X No	((If no, explair	n in remarks)		
Are vegetation				ignificantly distu		Are "normal		es" present?		
Are vegetation	, soil	, or hydrolo	ogyn	naturally problem		_		No		
			~					nswers in Remarks.)		
	INDINGS - Attach			npling point to	cations, tra	nsects, imp	ortant feat	ures, etc.		
Hydrophytic vegeta	•	Yes X	_ No	_						
Hydric soil present		Yes X	No	Is the samp		V	v			
Wetland hydrology		Yes X	No	within a wet	tland?	Yes	<u>X</u>	No		
Remarks: (Explain	alternative procedu	ures here or in	า a separate	report.)						
HYDROLOGY										
Wetland Hydrolog					Se	econdary Ind	icators (mini	mum of two required)		
Primary Indicators	(minimum of one is	required; che	ck all that a	apply)	-	Surface S	Soil Cracks (E	36)		
Surface Water ((A1)	_	Aquatic Fauna (B13)			Sparsely Vegetated Concave Surface (B8)				
High Water Tab	ole (A2)	_	_Marl Depo	osits (B15) (LRR	5) (LRR U) Drainage Patterns (B10)					
Saturation (A3)		_	Hydrogen	Sulfide Odor (C1) <u> </u>	Moss Trir	m Lines (B16)		
Water Marks (B	31)		Oxidized F	Rhizospheres on I	Living _	Dry-Seas	son Water Tal	ble (C2)		
Sediment Depo	sits (B2)	_						fish Burrows (C8)		
X Drift Deposits (E	33)		Presence	of Reduced Iron ((C4)	Saturation	n Visible on A	Aerial Imagery (C9)		
Algal Mat or Cru	ust (B4)		Recent Iro	on Reduction in Ti	illed -	X Geomorphic Position (D2)				
Iron Deposits (E	35)		Soils (C6)		-	Shallow Aquitard (D3)				
Inundation Visib	ble on Aerial Imagery	/ (B7)	Thin Muck	Surface (C7)	` '		FAC-Neutral Test (D5)			
X Water-Stained I	Leaves (B9)	_	Other (Exp	plain in Remarks)	-	Sphagnum moss (D8) (LRR T, U)				
Field Observation	ns:									
Surface water pres		No	X Dept	th (inches)		Wetlan	d hydrology	y present?		
Water table presen	nt? Yes	No	X Dept	th (inches)	_					
Saturation present	? Yes	No	X Dept	th (inches)	_	Yes X	<u> </u>	o		
(includes capillary	fringe)									
Describe recorded	data (stream gauge	e, monitoring	well, aerial i	photos, previous	inspections).	, if available:				
Remarks:										

_	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	
1 Liquidambar styraciflua	45	Υ	FAC	Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)
2 Quercus lyrata	25	<u>'</u>	OBL	
3 Taxodium distichum	10	<u> </u>	OBL	Total Number of Dominant Species Across all Strata: 4 (B)
	10			``
- Carpinae careinnana		N	FAC	Percent of Dominant Species
5 Nyssa sylvatica	10	<u>N</u>	FAC	that are OBL, FACW, or FAC:(A/B)
6				- · · · · · · · · · · · · · · · · · · ·
				Prevalence Index Worksheet
8				Total % Cover of:
500/ 64 4 4		Total Cove		OBL species 36 x 1 = 36
	0 20% (of total cover	20	FACW species <u>5</u> x 2 = <u>10</u>
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 111 x 3 = 333
1 Liquidambar styraciflua	30	<u> </u>	FAC	FACU species x 4 = 0
2 Carpinus caroliniana	4	<u>N</u>	FAC	UPL species0 x 5 =0
3 Betula nigra	2	N	FACW	Column totals(A)(B)
4 Taxodium distichum	1	N	OBL	Prevalence Index = B/A = 2.49
5 Ilex decidua	1	N	FACW	Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				X 3 - Prevalence index is ≤3.0*
	38	Total Cove		4 - Morphogical adaptations* (provide
50% of total cover: 1	9 20% (of total cover	7.6	supporting data in Remarks or on a
Herb Stratum (Plot size: 1m ²)			separate sheet)
1 Nyssa sylvatica	2	N	FAC	Problematic hydrophytic vegetation*
2 Boehmeria cylindrica	1	N	FACW	(explain)
3				
4				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
5				Definitions of Four Vegetation Strata:
6				•
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8				or more in diameter at breast height (DBH),
9				regardless of height.
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12				equal to 3.28 ft (1 m) tall
12	3	Total Cove		Herb – All herbaceous (non-woody) plants,
50% of total cover: 1		of total cover		regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius	. <u>. </u>	, ioiai covei	. 0.0	ft tall
	40	V	FAC	
	10	<u>Y</u> N	FACW	Woody Vine – All woody vines greater than 3.28 ft in height.
2 Brunnichia ovata		N	FACW	in neight.
3				
4				
5				
6				Hydrophytic
		= Total Cove		vegetation
50% of total cover:5	. 5 20% (of total cover	2.2	present? Yes X No No
Remarks: (Include photo numbers here or on a separ	ate sheet)			

Sampling Point: Plot 34

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r confi	irm the absence of ind	licators.)			
Depth	Matrix		Redo	ox Feature:	S						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 4	10YR 5/2	98	10YR 5/8	2	С	PL	silty clay loam				
4 - 8	10YR 5/2	49	10YR 5/8	2	С	М	silty clay loam				
	10YR 6/1	49									
8 - 12	10YR 5/2	98	10YR 6/8	2	С	M	silty clay loam				
¹ Type: C = 0	Concentration, D = D	epletion, RM	I = Reduced Matrix, I	MS = Masł	ked Sand	Grains	s. ² Location: PL = P	ore Lining, M = Matrix			
Hydric Soil	Indicators:		Polyvalue Below	Surface (S8)		Indicators for Probler	natic Hydric Soils³:			
Histisol	(A1)	-	(LRR S, T, U)			•	1 cm Muck (A10) (· ·			
Histic E	pipedon (A2)	-	Thin Dark Surfac				2 cm Muck (A10) (LRR S)			
	istic (A3)	-	Loamy Mucky M		(LRR O)		Reduced Vertic (F				
	en Sulfide (A4)	-	Loamy Gleyed M	, ,		·	(outside MLRA 15	60A, B)			
	d Layers (A5)		X Depleted Matrix	` '			Piedmont Floodpla	in Soils (F19)			
	Bodies (A6) (LRR P	-	Redox Dark Surf				(LRR P, S, T)				
	ucky Mineral (A7) (L l	-	Depleted Dark S	=)		Anomalous Bright I	Loamy Soils (F20)			
_	resence (A8) (LRR L	, (r	Redox Depression Marl (F10) (LRR	, ,		,	(MLRA 153B) Red Parent Materia	ol (TE12)			
	uck (A9) (LRR P. T) d Below Dark Surfac	·ο (Λ11)	Depleted Ochric	•	PA 151)	i	Very Shallow Dark				
	d Below Dark Surfac ark Surface (A12)	e (ATT)			-	,	Other (explain in re	· ·			
			Iron-Manganese (LRR O, P, T)	ge Masses (F12)							
(MLRA	rairie Redox (A16) 150A)	-		e (F13) (LRR P, T, U)							
	Mucky Mineral (S1)	-	Delta Ochric (F1								
(LRR O		-	Reduced Vertic		-	150E		³ Indicators of hydrophytic vegetation			
— `	Gleyed Matrix (S4)	-					and weltand hydrology must be A) present, unless disturbed or				
Sandy F	Redox (S5)	-	—— Anomalous Brigh				problematic				
Stripped	d Matrix (S6)		(MLRA 149A, 1			,					
Dark Su	ırface (S7) (LRR P, \$	S, T, U)									
Postriotivo	Layer (if observed)										
Type:	Layer (II Observed)) -									
Depth (inch	es):			Hydric soi	l present	t?	Yes X	No			
Remarks:											

Project/Site	Moro Creek Mitig	ation Bank	City/	County:	Bunn	Sampling	Date:	2018/09/18		
Applicant/Owner:	Arkansas Department of Transportation			n State:	AR	Sampling	Point:	Plot 35		
Investigator(s):	Kayti Ev	ving, Joe Led	lvina	Section, 7	Γownship, Ran	ige:	T8S R14W	/ S24		
Landform (hillslope	, terrace, etc.):	n	one	Local relief	(concave, con	ivex, none):	n	ione		
Slope (%): 0	Lat:			Long:		Datum:	W	GS84		
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Classif	ication:	PFO	1A		
Are climatic/hydrolo	for this time o	of the year? Yes	X No	(If no,	, explain in re	marks)				
Are vegetation	, soil	, or hydrolo	ogysigr	nificantly disturbe	d? Are	"normal circur	mstances" pre	esent?		
Are vegetation	, soil	, or hydrolo	ogynat	urally problemation		Yes X				
					•	-	-	s in Remarks.)		
SUMMARY OF FI			owing samp	oling point loca	tions, transe	cts, importa	nt features,	etc.		
Hydrophytic vegeta	•	Yes X	No							
Hydric soil present?		Yes X	No	Is the sampled						
Wetland hydrology	present?	Yes X	No	within a wetlar	1d? \	Yes X	No			
HYDROLOGY										
Wetland Hydrolog	· -				Secon	ndary Indicator	rs (minimum	of two required)		
Primary Indicators ((minimum of one is	required; che	ck all that app	ply)	_	Surface Soil C	racks (B6)			
Surface Water (A1)	_	_Aquatic Faur			Sparsely Vegetated Concave Surface (B8)				
High Water Tab	le (A2)	_	_Marl Deposi	its (B15) (LRR U)		Drainage Patterns (B10)				
Saturation (A3)		_	_Hydrogen Su	ulfide Odor (C1)		Moss Trim Line	es (B16)			
Water Marks (B	1)		Oxidized Rhi	izospheres on Livi	ng	Dry-Season Water Table (C2)				
Sediment Depos		_	Roots (C3)			Crayfish Burrows (C8)				
X Drift Deposits (B	33)	_	Presence of	Reduced Iron (C4		Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Cru	ıst (B4)		Recent Iron	Reduction in Tilled	-	Geomorphic Position (D2)				
Iron Deposits (B	55)	_	Soils (C6)			Shallow Aquitard (D3)				
	le on Aerial Imagery	' (B7)	Thin Muck S	urface (C7)		X FAC-Neutral Test (D5)				
X Water-Stained L	.eaves (B9)	_	_Other (Expla	in in Remarks)		Sphagnum mo	ss (D8) (LRR	T, U)		
Field Observation	s:									
Surface water pres	ent? Yes _	No	X Depth	(inches)		Wetland hyd	drology pres	ent?		
Water table presen	t? Yes	No	X Depth	(inches)						
Saturation present?	? Yes	No	X Depth	(inches)	Ye	es X	No			
(includes capillary f	ringe)									
Describe recorded	data (stream gauge	e, monitoring v	well, aerial ph	otos, previous ins	spections), if a	vailable:				
Remarks:										

Sampling Point:

Plot 35

Profile Des	cription: (Describe	to the depti	n needed to docum	ent the in	dicator o	r confi	rm the absence of in	dicators.)			
Depth	Matrix		Redo	ox Features	S						
(Inches)	, , , ,		Color (moist)	% Type ¹ L			Texture	Remarks			
0 - 6	10YR 5/2	98	10YR 6/8	2	С	PL	silty clay loam				
6 - 12	10YR 5/2	70	10YR 6/8	30	С	PL	silty clay loam				
¹ Type: C = 0	Concentration, D = D	epletion, RM	= Reduced Matrix,	MS = Mask	ed Sand	Grains	s. ² Location: PL = F	Pore Lining, M = Matrix			
1 -	Indicators:		Polyvalue Below	/ Surface (S8)		Indicators for Proble	-			
Histisol	•	-	(LRR S, T, U)			-	1 cm Muck (A10) (•			
_	pipedon (A2)	_	Thin Dark Surface				2 cm Muck (A10) ((LRR S)			
	listic (A3)	-	Loamy Mucky M		(LRR O)		Reduced Vertic (F				
	en Sulfide (A4)	=	Loamy Gleyed N			-	(outside MLRA 1				
	d Layers (A5) : Bodies (A6) (LRR P	- - T II\	X Depleted Matrix Redox Dark Sur	` '			Piedmont Floodpla (LRR P, S, T)	Piedmont Floodplain Soils (F19)			
	ucky Mineral (A7) (L l	-	Depleted Dark S)	-	Anomalous Bright Loamy Soils (F20)				
_	resence (A8) (LRR L	_	Redox Depressi	· ·	,		(MLRA 153B)	Loamy Soils (F20)			
	uck (A9) (LRR P. T)	_	Marl (F10) (LRR	` '		-	Red Parent Materi	al (TF12)			
	ed Below Dark Surfac	e (A11)	Depleted Ochric	•	RA 151)	-	—— Very Shallow Dark				
	ark Surface (A12)	` ′ -	 Iron-Manganese		-	-	Other (explain in r	• •			
Coast F	Prairie Redox (A16)		(LRR O, P, T)								
(MLRA			Umbric Surface	(F13) (LRF	R P, T, U)						
Sandy I	Mucky Mineral (S1)	_	Delta Ochric (F1	7) (MLRA	151)		31	31			
(LRR O	• •	_	Reduced Vertic				and weltand hydro	³ Indicators of hydrophytic vegetation and weltand hydrology must be			
	Gleyed Matrix (S4)	_	Piedmont Flood	plain Soils	(F19) (M I	_RA 14	^{A)} present, unless disturbed or				
	Redox (S5)		Anomalous Brig	-	•)	problematic	problematic			
— ··	d Matrix (S6)		(MLRA 149A, 1	53C, 153D))						
Dark St	urface (S7) (LRR P, \$	S, I, U)									
Restrictive	Layer (if observed)):									
Type:											
Depth (inch	es):			Hydric soi	l present	t?	Yes X	No			
Remarks:											
rtomanto.											

Project/Site	ite Moro Creek Mitigation Bank City/C			City/County:	unty: Bunn S		Sampling Date: 2018/09/18				
Applicant/Owner:	Arkansas Dej	Arkansas Department of Transportation			AR	Sam	npling Point	: Plot 36			
Investigator(s):	Sectio	n, Township, l	Range:	T8:	S R14W S24						
Landform (hillslope,	, terrace, etc.):		none	Local re	lief (concave,	convex, nor	ne):	none			
Slope (%): 0	Lat:			Long:		Datı	um:	WGS84			
Soil Map Unit Name	<u> </u>	Wehadke	e silt loam	1	NWI Cla	assification:		PFO1A			
Are climatic/hydrolo	gic conditions of the	ne site typica	I for this tim	ne of the year? Ye	es X No		(If no, explanation)	ain in remarks)			
Are vegetation				significantly distu		Are "normal	circumstan	nces" present?			
Are vegetation	, soil	, or hydro	logy	naturally problem		-	X	No			
								answers in Remarks.)			
SUMMARY OF FI				ampling point lo	cations, trai	nsects, imp	portant fea	atures, etc.			
Hydrophytic vegeta	· ·	Yes X		_							
Hydric soil present?		Yes X	No	Is the samp							
Wetland hydrology	present?	Yes X	No	within a we	tland?	Yes	<u>X</u>	No			
HYDROLOGY	1 11 -4										
Wetland Hydrolog	_		1: - II the at	L X	Se	=	-	inimum of two required)			
Primary Indicators (•	requirea; cn			-		Soil Cracks				
Surface Water (,	_		Fauna (B13)	-	Sparsely Vegetated Concave Surface (B8)					
High Water Tabl	e (A2)	_		posits (B15) (LRR							
Saturation (A3)		_	Hydroger	n Sulfide Odor (C1	_		im Lines (B1	•			
Water Marks (B	•			Rhizospheres on l	Living _		son Water T				
Sediment Depos		_	Roots (C		-		fish Burrows (C8)				
X Drift Deposits (B	•	_	Presence	e of Reduced Iron (n Aerial Imagery (C9)						
Algal Mat or Cru				ron Reduction in Ti	illed _	X Geomorphic Position (D2)					
Iron Deposits (B	·	_	Soils (C6	•	-		Aquitard (D				
	le on Aerial Imagery	/ (B7)		ck Surface (C7)	· '		utral Test (D	,			
X Water-Stained L	eaves (B9)		Other (E)	Other (Explain in Remarks)			Sphagnum moss (D8) (LRR T, U)				
Field Observations	s:										
Surface water prese	ent? Yes _	No	X De	pth (inches)		Wetlar	nd hydrolo	gy present?			
Water table present	t? Yes _	No.	X De	pth (inches)							
Saturation present?	Yes _	No.	X De	pth (inches)		Yes X	<u>(</u>	No			
(includes capillary f	ringe)										
Describe recorded	data (stream gaug	e, monitoring	⊦well, aeria	l photos, previous	inspections),	, if available:	:				
Remarks:											

Sampling Point:

Plot 36

Profile Des	cription: (Describe	to the dept	n needed to docun	nent the in	dicator o	r confi	rm the absence of ind	icators.)			
Depth	Matrix	Red	s								
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 4	10YR 4/2	98	10YR 5/6	2	С	М	silty clay loam				
4 - 12	10YR 4/2	50	10YR 5/8	30	С	М	silty clay loam				
	10YR 6/1	20									
¹ Type: C = 0	Concentration, D = D	Depletion, RM	= Reduced Matrix.	MS = Mask	ked Sand	Grains	Location: PL = Po	ore Lining, M = Matrix			
	Indicators:	'					Indicators for Problem				
Histisol			Polyvalue Belov (LRR S, T, U)	w Surface (30)		1 cm Muck (A10) (I	-			
	pipedon (A2)	-	Thin Dark Surfa	nce (S9) (LF	RR S, T,	U)	2 cm Muck (A10) (I	•			
	listic (A3)	=	 Loamy Mucky N				Reduced Vertic (F1	•			
Hydrog	en Sulfide (A4)	=	 Loamy Gleyed l				(outside MLRA 15				
Stratifie	d Layers (A5)	-	X Depleted Matrix	(F3)		•	—— Piedmont Floodpla	in Soils (F19)			
Organio	Bodies (A6) (LRR F	P, T, U)	Redox Dark Su	rface (F6)			(LRR P, S, T)				
5 cm M	ucky Mineral (A7) (L	RR P, T, U)	Depleted Dark	Surface (F7	·)	•	Anomalous Bright Loamy Soils (F20)				
Muck P	resence (A8) (LRR (J)	X Redox Depress	ions (F8)		_	(MLRA 153B)	(MLRA 153B)			
1 cm M	Marl (F10) (LRF	R U)			Red Parent Materia	al (TF12)					
Deplete	d Below Dark Surfac	ce (A11)	Depleted Ochrid	c (F11) (ML	RA 151)		Very Shallow Dark	Surface (TF12)			
Thick D	ark Surface (A12)		Iron-Manganes	e Masses (I	marks)						
Coast F	Prairie Redox (A16)	_	(LRR O, P, T)								
(MLRA	150A)	_	Umbric Surface	ce (F13) (LRR P, T, U)							
Sandy I	Mucky Mineral (S1)	_	Delta Ochric (F	17) (MLRA	151)		³ Indicators of hydrophytic vegetation and weltand hydrology must be (9A) present, unless disturbed or problematic				
LRR O	-	_	Reduced Vertic								
	Gleyed Matrix (S4)	_	Piedmont Flood	Iplain Soils	(F19) (M	LRA 14					
	Redox (S5)		Anomalous Brig))					
	d Matrix (S6)	<u> </u>	(MLRA 149A, 1	53C, 153D)						
Dark Su	urface (S7) (LRR P, S	S, T, U)									
Restrictive	Layer (if observed)):									
Type:		•									
Depth (inch	es):			Hydric soi	il presen	t?	Yes X	No			
Remarks:											

Project/Site	Moro Creek Mitigation Bank Ci				County:	Bunn	Sampling D	ate: 20	18/09/18		
Applicant/Owner:	Arkansas Department of Transportat		ortatio	on State:	AR	Sampling Po	oint: F	Plot 37			
Investigator(s):	Kayti E	Ewing, Joe Led	vina		Section, 7	Γownship, R	ange:	T8S R14W S	24		
Landform (hillslope	, terrace, etc.):	n	one	ne Local relief (cor			convex, none):	nor	1e		
Slope (%): 0	Lat:				Long:		Datum:	WGS	84		
Soil Map Unit Name	e	Wehadkee	silt loa	am		NWI Clas	sification:	PFO1A	١.		
Are climatic/hydrologic conditions of the site typical for th				time o	of the year? Yes	X No _	(If no, e	explain in rema	arks)		
Are vegetation	, soil	, or hydrolo	gy	sig	nificantly disturbe	d? A	re "normal circums	stances" prese	ent?		
Are vegetation	, soil	, or hydrolo	gy	nat	turally problemation		Yes X				
						-	f needed, explain a	=	•		
SUMMARY OF FI		h site map sh	owing	samı	pling point loca	tions, trans	sects, important	features, et	c.		
Hydrophytic vegeta	-	Yes X	No_								
Hydric soil present?		Yes	No_		Is the sampled						
Wetland hydrology	present?	Yes	No_	Х	within a wetlar	ıd?	Yes	No	X		
Remarks: (Explain	alternative proced	dures here or in	a sepa	arate r	eport.)						
HYDROLOGY											
Wetland Hydrolog							andan Indicators	/minimum of	two required)		
Primary Indicators		is required: che	ck all th	hat an	nlv)	Sec	condary Indicators	•	two required)		
Surface Water (-		_	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8)				
<u> </u>	ŕ		_		na (B13) iits (B15) (LRR U)	_	Drainage Patterns (B10)				
High Water Tab Saturation (A3)	le (AZ)		_	-	ulfide Odor (C1)	_	Moss Trim Lines (B16)				
	1)		_	_		_					
Water Marks (B	•		Oxidized Rhizospheres on Living Roots (C3)			ng <u> </u>	Dry-Season Water Table (C2) Crayfish Burrows (C8)				
Sediment Deposits (E			Presence of Reduced Iron (C4)				Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Cru	•		_				X Geomorphic Position (D2)				
Iron Deposits (B			Recent Iron Reduction in Tilled			·	Shallow Aquitard (D3)				
	ole on Aerial Image		Soils (C6) Thin Muck Surface (C7)				FAC-Neutral Test (D5)				
Water-Stained L	_		Thin Muck Surface (C7) Other (Explain in Remarks)			_	Sphagnum moss (D8) (LRR T, U)				
	. ,			(Ехріс					-,		
Field Observation			.								
Surface water pres		No			(inches)		Wetland hydro	ology presen	it?		
Water table presen	•	No		•	(inches)		.,	٧			
Saturation present?		No	<u>X</u> l	Depth	(inches)		Yes	No X	· <u> </u>		
(includes capillary f	<u> </u>						£: - - -				
Describe recorded	data (stream gau	ge, monitoring v	veii, ae	ırıaı pr	notos, previous ins	spections), ii	avallable:				
Remarks:											
Remarks.											

VEGETATION -- Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	Number of Dominant Species
1 Liquidambar styraciflua	50	Y	FAC	that are OBL, FACW, or FAC: 3 (A)
2 Quercus nigra	10		FAC	```
3				Total Number of Dominant Species Across all Strata: 3 (B)
4				`
5				Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)
6				(74B)
7				Prevalence Index Worksheet
8				Total % Cover of:
0	60	Total Cove		
50% of total cover: 3		of total cover		OBL species
Sapling/Shrub Stratun (Plot size: 15-m radius	2070 0	n lotal cover		FAC species 154 x 3 = 462
1 Liquidambar styraciflua	, 40	Υ	FAC	FACU species 1 x 4 = 4
		<u> </u>		
2 Carpinus caroliniana	40	N	FAC	
3 Ilex opaca	10		FAC	Column totals <u>155</u> (A) <u>466</u> (B)
4 Quercus alba		<u>N</u>	FACU	Prevalence Index = B/A = 3.01
5 Carya alba		<u>N</u>		Hydrophytic Vegetation Indicators:
6 Vaccinium sp.	1	<u>N</u>		1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				3 - Prevalence index is ≤3.0*
		Total Cove		4 - Morphogical adaptations* (provide
50% of total cover:	5. 5 20% c	of total cover	18.6	supporting data in Remarks or on a
Herb Stratum (Plot size: 1m²)			separate sheet)
1 Carpinus caroliniana	1	N	FAC	Problematic hydrophytic vegetation*
2				(explain)
3				*Indicators of hydric soil and wetland hydrology must be
4				present, unless disturbed or problematic
5				Definitions of Four Vegetation Strata:
6				
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8				or more in diameter at breast height (DBH),
9				regardless of height.
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12				equal to 3.28 ft (1 m) tall
	1 :	Total Cove	r	Herb – All herbaceous (non-woody) plants,
50% of total cover: 0 .		of total cover		regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius)			ft tall
1 Vitis rotundifolia	3	N	FAC	Woody Vine – All woody vines greater than 3.28 ft
2				in height.
3				
4				
5				
6				Hydrophytic
	3	Total Cove	r	vegetation
50% of total cover: 1 .	.5 20% c	of total cover	: 0.6	present? Yes X No
				<u> </u>
Remarks: (Include photo numbers here or on a separ	ate sheet)			•
, , , , , , , , , , , , , , , , , , , ,	,			

Sampling Point: Plot 37

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the inc	dicator o	r confi	irm the absence of inc	licators.)		
Depth	Matrix		Rede	ox Features	3					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 12	10YR 3/4	100					silty clay loam			
1 _{T.max} C = 4	Concentration D = D	Appletion DM	L - Dadward Matrix	MC - Maak	rad Cand	Crains	21 costion: D1 = D	Dara Lining M - Matrix		
	Concentration, D = D	epietion, Riv				Grains		Pore Lining, M = Matrix		
_	Hydric Soil Indicators: Polyvalue Belo Histisol (A1) (LRR S, T, U)						Indicators for Problem	-		
_	(LRR S, T, U) Thin Dark Surfa	oo (CO) (I F	DC TI		1 cm Muck (A10) (•				
Histic E				2 cm Muck (A10) (•					
Black H	lineral (F1)	(LKK U)		Reduced Vertic (F						
Hydroge	Loamy Gleyed Modernix	, ,		•	(outside MLRA 1					
Stratifie	` '			Piedmont Floodpla	in Soils (F19)					
Organic	Redox Dark Sur		`		(LRR P, S, T)					
5 cm Muck Presence (A8) (LRR P, T, U) Depleted Dark				-)		Anomalous Bright (MLRA 153B)	Loamy Soils (F20)		
Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P. T) Redox Depres Marl (F10) (LR						,	Red Parent Materi	al (TE12)		
	d Below Dark Surfac	. (A11)	Depleted Ochric	•	DA 151\	i	Very Shallow Dark			
	ark Surface (A12)	e (ATT)			-	i	Other (explain in re	· ·		
			Iron-Manganese (LRR O, P, T)	: Masses (F	-12)	i	Other (explain in re	siliaiks)		
Coast F (MLRA	Prairie Redox (A16)	-	Umbric Surface	(E13) (I PE						
	-	-		F17) (MLRA 151)						
Sandy I (LRR O	Mucky Mineral (S1)	-	Reduced Vertic		-	1505	³ Indicators of hydro	³ Indicators of hydrophytic vegetation		
	Gleyed Matrix (S4)	-					and weltand hydrology must be			
	Redox (S5)	-					present, unless dis problematic	A) present, unless disturbed or		
	d Matrix (S6)		Anomalous Brig (MLRA 149A, 1	-))	problematic			
	urface (S7) (LRR P, \$	S T II)	(MERX 143A, 1	000, 100D,	,					
Bank oc	anace (O7) (ERRY),	3, 1, 0,								
Restrictive	Layer (if observed)):								
Type:										
Depth (inch	es):			Hydric soi	l presen	t?	Yes	No <u>X</u>		
Remarks:			<u> </u>							
ixemaiks.										

Project/Site	Moro Creek Mitig	gation Bank	City/	/County: B	Bunn S	Sampling Date:	2018/09/18			
Applicant/Owner:	Arkansas De	partment of T	ransportatio	on State:	AR S	Sampling Point:	Plot 38			
Investigator(s):	Kayti E	wing, Joe Led	vina	Section, Tow	vnship, Range:	T8S R	14W S24			
Landform (hillslope	, terrace, etc.):	n	one	Local relief (co	oncave, convex,	none):	none			
Slope (%): 0	Lat:			Long:		Datum:	WGS84			
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Classificatio	on:	PFO1A			
Are climatic/hydrolo	ogic conditions of t	he site typical f	for this time of	of the year? Yes >	(No	(If no, explain	in remarks)			
Are vegetation	, soil	, or hydrolo	ogysig	nificantly disturbed?	Are "norn	mal circumstances	s" present?			
Are vegetation	, soil	, or hydrolo	ogynat	turally problematic?			o			
						-	swers in Remarks.)			
			owing sam	pling point locatio	ns, transects,	important featu	res, etc.			
Hydrophytic vegeta		Yes X	No							
Hydric soil present?		Yes X	No	Is the sampled ar						
Wetland hydrology	present?	Yes	No X	within a wetland?	? Yes_	N	o <u>X</u>			
Remarks: (Explain	alternative proced	ures here or in	a separate r	eport.)						
HYDROLOGY										
Wetland Hydrolog	y Indicators:				Secondary	Indicators (minim	num of two required)			
Primary Indicators	(minimum of one is	s required; che	ck all that ap	pply)	Surfa	ace Soil Cracks (B6	5)			
Surface Water (A1)Aquat				ına (B13)	Spar	sely Vegetated Cor	ncave Surface (B8)			
High Water Tab	le (A2)	_	Marl Depos	sits (B15) (LRR U)	Drain	nage Patterns (B10)			
Saturation (A3) Hydrogen Sulfid				ulfide Odor (C1)	Moss	Trim Lines (B16)				
Water Marks (B	1)		Oxidized Rh	nizospheres on Living	Dry-S	Season Water Tabl	e (C2)			
Sediment Depos	sits (B2)		Roots (C3)		Crayf	fish Burrows (C8)				
Drift Deposits (E	33)		Presence of	Reduced Iron (C4)	Satur	ration Visible on Ae	erial Imagery (C9)			
Algal Mat or Cru	ıst (B4)		Recent Iron	Reduction in Tilled	X Geon	X Geomorphic Position (D2)				
Iron Deposits (B	55)		Soils (C6)		Shall	ow Aquitard (D3)	quitard (D3)			
Inundation Visib	ole on Aerial Imager	y (B7)	Thin Muck S	Surface (C7)	FAC-	FAC-Neutral Test (D5)				
Water-Stained L	eaves (B9)		Other (Expla	ain in Remarks)	Sphagnum moss (D8) (LRR T, U)					
Field Observation	e.									
Surface water pres		No	X Depth	(inches)	We	tland hydrology	present?			
Water table presen	_	No	X Depth	· · ·						
Saturation present?	_	No	X Depth	· · ·	Yes	No	X			
(includes capillary f	_			(_					
· · ·	-	e monitoring v	well, aerial pł	notos, previous inspe	ctions) if availa	ble:				
	(99	,-,g .	,	,	,,					
Remarks:	.				,					

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 38 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) **Percent of Dominant Species** 80.00% (A/B) that are OBL, FACW, or FAC: **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **0** x 1 = 20% of total cover: **FACW** species **110** x 2 = 50% of total cover: 220 Sapling/Shrub Stratun (Plot size: 15-m radius FAC species 7 x 3 = 1 Liquidambar styraciflua **FACU** species 44 **FAC** x 4 = **FAC UPL** species Nyssa sylvatica x 5 = 0 Column totals Callicarpa americana 1 **FACU 128** (A) **285** (B) llex opaca 1 Υ **FAC** Prevalence Index = B/A = 2.23 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation X 2 - Dominance test is >50% X 3 - Prevalence index is ≤3.0* = Total Cover 4 - Morphogical adaptations* (provide 50% of total cover: 2.5 20% of total cover: supporting data in Remarks or on a Herb Stratum (Plot size: separate sheet) Problematic hydrophytic vegetation* 1 Panicum verrucosum 100 **FACW** (explain) 10 **FACU** Phytolacca americana Boehmeria cylindrica 10 **FACW** *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic 5 **Definitions of Four Vegetation Strata:** Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall Herb - All herbaceous (non-woody) plants, = Total Cover regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: 24 (Plot size: 15-m radius) Woody Vine Stratum Vitis rotundifolia Woody Vine – All woody vines greater than 3.28 ft **FAC** 2 3 4 5 Hydrophytic 3 = Total Cover vegetation Yes X No 20% of total cover: 0.6 present? 50% of total cover: 1.5 Remarks: (Include photo numbers here or on a separate sheet)

Profile Des	cription: (Describe	to the depti	n needed to docum	nent the in	dicator o	r confi	rm the absence of ind	icators.)		
Depth	Matrix		Red	ox Feature	s					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 3	10YR 3/2	78	10YR 4/6	2	С	М	silty clay loam			
	10YR 4/2	20								
3 - 12	10YR 5/2	49	10YR 5/8	2	С	М	clay loam			
	10YR 4/2	49					<u>, </u>			
	-									
¹ Type: C = (Concentration, D = D	enletion PM	- Peduced Matrix	MS - Mas	red Sand	Grains	² Location: DL = D	ore Lining, M = Matrix		
	Indicators:	epielion, Mivi					Indicators for Problen			
Histisol			Polyvalue Belov (LRR S, T, U)	v Surface (S8)		1 cm Muck (A10) (L	-		
_	pipedon (A2)	=	Thin Dark Surfa	ce (S0) (L	реті		2 cm Muck (A10) (L	•		
_	istic (A3)	-	Loamy Mucky M					•		
	en Sulfide (A4)	_	Loamy Gleyed N		,(0)		Reduced Vertic (F1 (outside MLRA 15			
— · ·	d Layers (A5)	-	X Depleted Matrix			-				
	: Bodies (A6) (LRR P	- P. T. U)	Redox Dark Sur	, ,			Piedmont Floodplai (LRR P, S, T)	11 Solis (F19)		
	ucky Mineral (A7) (LI	_	Depleted Dark S		.)	-		Anomalous Bright Loamy Soils (F20)		
	resence (A8) (LRR L	_	Redox Depressi	-	,		(MLRA 153B)	Joanny Solis (1 20)		
	uck (A9) (LRR P. T)	<u>-</u>	 Marl (F10) (LRF							
_	d Below Dark Surfac	e (A11)	Depleted Ochric	•	RA 151)	-	—— Very Shallow Dark			
	ark Surface (A12)	` ′ -	 Iron-Manganese		-	-	Other (explain in re	· ·		
	rairie Redox (A16)		(LRR O, P, T)	o maddad (12)	-		,		
(MLRA		_	Umbric Surface	(F13) (LRI	R P, T, U)					
Sandy N	Mucky Mineral (S1)	_	Delta Ochric (F1				•			
(LRR O		_	Reduced Vertic	(F18) (ML I	RA 150A,	150E		³ Indicators of hydrophytic vegetation		
Sandy (Gleyed Matrix (S4)	_	Piedmont Flood	plain Soils	(F19) (M I	_RA 14	and weltand hydrology must be A) present, unless disturbed or problematic			
Sandy F	Redox (S5)	_	— Anomalous Brig							
Stripped	d Matrix (S6)	_	(MLRA 149A, 1	-		,				
Dark Su	ırface (S7) (LRR P, S	S, T, U)								
Postriotivo	Layer (if observed)									
Type:	Layer (II Observed)	•								
Depth (inch	es).			Hydric so	il present	17	Yes X	No		
								<u> </u>		
Remarks:										

Project/Site Moro Creek Mitigation Bank City/County: Bunn Sampling Date: 20	8/09/18				
	lot 39				
Investigator(s): Kayti Ewing, Joe Ledvina Section, Township, Range: T8S R14W S.	24				
Landform (hillslope, terrace, etc.): none Local relief (concave, convex, none): none	е				
Slope (%):0	34				
Soil Map Unit Name Wehadkee silt loam NWI Classification: PFO1A					
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes X No (If no, explain in remaindent of the year)	rks)				
Are vegetation, soil, or hydrologysignificantly disturbed? Are "normal circumstances" prese	nt?				
Are vegetation, soil, or hydrologynaturally problematic? Yes X No	_				
(If needed, explain any answers in	•				
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.	;.				
Hydrophytic vegetation present? Yes X No					
Hydric soil present? Yes X No Is the sampled area					
Wetland hydrology present? Yes X No within a wetland? Yes X No					
Remarks: (Explain alternative procedures here or in a separate report.)					
HYDROLOGY					
Wetland Hydrology Indicators: Secondary Indicators (minimum of t	wo required)				
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)					
Surface Water (A1)Aquatic Fauna (B13)Sparsely Vegetated Concave S	urface (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 on Living Dry-Season Water Table (C2)					
Sediment Deposits (B2)Roots (C3)Crayfish Burrows (C8)					
Drift Deposits (B3) Presence of Reduced Iron (C4) Saturation Visible on Aerial Image	gery (C9)				
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled X Geomorphic Position (D2)	X Geomorphic Position (D2)				
Iron Deposits (B5) Soils (C6) Shallow Aquitard (D3)					
Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) X FAC-Neutral Test (D5)					
Water-Stained Leaves (B9) Other (Explain in Remarks) Sphagnum moss (D8) (LRR T,	Sphagnum moss (D8) (LRR T, U)				
Field Observations:					
Surface water present? Yes No X Depth (inches) Wetland hydrology presen	i?				
Water table present? Yes No X Depth (inches)					
Saturation present? Yes No X Depth (inches) Yes X No					
(includes capillary fringe)					
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

Sampling Point:

Plot 39

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r confi	rm the absence of ind	icators.)		
Depth	Matrix		Redo	x Feature	S					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 3	10YR 4/2	98	10YR 5/8	2	С	PL	silty clay loam			
3 - 6	10YR 4/2	39	7.5YR 4/6	2	၁	М	silty clay loam			
	10YR 5/2	59								
6 - 12	10YR 5/2	10	10YR 5/6	2	C	М	silty clay loam			
	10YR 6/1	88								
¹ Type: C = 0	Concentration, D = D	epletion, RM	1 = Reduced Matrix, I	MS = Mask	ked Sand	Grains	s. ² Location: PL = P	ore Lining, M = Matrix		
Hydric Soil	Indicators:		Polyvalue Below	Surface (S8)		Indicators for Probler	natic Hydric Soils ³ :		
Histisol	(A1)	_	(LRR S, T, U)	(,		1 cm Muck (A10) (I	∟RR O)		
Histic E	pipedon (A2)		Thin Dark Surfac	ce (S9) (LF	RR S, T, L	J)	2 cm Muck (A10) (I	₋RR S)		
Black H	istic (A3)	-	Loamy Mucky M	ineral (F1)	(LRR O)		Reduced Vertic (F1	√8)		
Hydroge	en Sulfide (A4)		Loamy Gleyed M	/latrix (F2)			(outside MLRA 15	0A, B)		
	d Layers (A5)	•	X Depleted Matrix	` '			Piedmont Floodpla	in Soils (F19)		
	Bodies (A6) (LRR P		Redox Dark Surf				(LRR P, S, T)			
	ucky Mineral (A7) (LI		Depleted Dark S	=)			Anomalous Bright Loamy Soils (F20) (MLRA 153B)		
	resence (A8) (LRR L	J)	Redox Depression	` '						
	uck (A9) (LRR P. T)		Marl (F10) (LRR	•	5.4.5 ()	•	Red Parent Materia			
	d Below Dark Surfac	e (A11)	Depleted Ochric	(F11) (ML	RA 151)	•	Very Shallow Dark	· ·		
I hick D	ark Surface (A12)		Iron-Manganese	Masses (I	- 12)		Other (explain in re	marks)		
	rairie Redox (A16)	-	(LRR O, P, T)	/E42\ /I D E	. D. T. IIV					
(MLRA	-	•	Umbric Surface							
Sandy N (LRR O	Mucky Mineral (S1)		Delta Ochric (F1 Reduced Vertic (-	1505	³ Indicators of hydro	³ Indicators of hydrophytic vegetation and weltand hydrology must be		
<u> </u>	Gleyed Matrix (S4)						and weltand hydrol			
	Redox (S5)	•					A) present, unless disturbed or problematic			
	d Matrix (S6)		Anomalous Brigh (MLRA 149A, 15)	problematio	problematic		
	ırface (S7) (LRR P, \$	S. T. U)		, 1002	,					
			1							
	Layer (if observed)	:								
Type:	,						v			
Depth (inche	es):			Hydric soi	l present	t?	Yes X	No		
Remarks:			•							

Project/Site	Moro Creek N	itigation Ba	ank	City/	County:	Bunn	S	ampling Dat	te: 2018/09/19		
Applicant/Owner:	Arkansas	Departmen	t of Tra		n State:		Sa	ampling Poir	nt: Plot 40		
Investigator(s):	Kayt	i Ewing, Jo	e Ledvi	ina	Section, Township, Range: T8S R14W S24						
Landform (hillslope	, terrace, etc.):		nor	ne	Local reli	ief (concave,	convex, r	none):	none		
Slope (%): 0	Lat:				Long:		D	atum:	WGS84		
Soil Map Unit Name	e	Weha	dkee s	ilt loam		NWI Cla	ssification	າ:	PFO1A		
Are climatic/hydrolo	ogic conditions	of the site ty	pical fo	r this time o	of the year? Yes	s <u>X</u> No_		(If no, exp	plain in remarks)		
Are vegetation	, soil	, or h	/drolog	ysigi	nificantly disturl	bed?	Are "norm	al circumsta	ances" present?		
Are vegetation	, soil	, or h	/drolog	ynat	urally problema	atic?	Ye	es <u>X</u>	No		
						(If needed	l, explain an	y answers in Remarks.)		
SUMMARY OF FI	NDINGS - Att	ach site ma	p sho	wing sam	oling point lo	cations, trar	isects, ii	mportant fo	eatures, etc.		
Hydrophytic vegeta	-	Yes_	X	No							
Hydric soil present?		Yes_	<u>X</u>	No	Is the sample						
Wetland hydrology	present?	Yes_	<u>X</u>	No	within a wetl	land?	Yes_	X	No		
` .	·			·	,						
HYDROLOGY											
Wetland Hydrolog	_					Se	condary I	Indicators (n	minimum of two required)		
Primary Indicators ((minimum of or	ne is required	l; check	call that ap	ply)	_		e Soil Crack	` '		
Surface Water (A1)Aquatic					na (B13)	_	Sparse	ely Vegetate	d Concave Surface (B8)		
High Water Table (A2) Marl Deposit					its (B15) (LRR	U) _	Draina	age Patterns	(B10)		
Saturation (A3) Hydrogen Sulfi					ulfide Odor (C1)	_	Moss	Trim Lines (E	316)		
Water Marks (B1) Oxidized R				Oxidized Rh	izospheres on L	iving _	Dry-Se	eason Water	Table (C2)		
Sediment Depos				Roots (C3)							
Drift Deposits (B	33)		f	Presence of	Reduced Iron (0	_			on Aerial Imagery (C9)		
Algal Mat or Cru					n Reduction in Tilled X Geomorphic Position (D2)						
Iron Deposits (B	·			Soils (C6)		_	Shallow Aquitard (D3)				
Inundation Visib		gery (B7)		Thin Muck S	, ,	_	FAC-Neutral Test (D5)				
Water-Stained L	₋eaves (B9)			Other (Expla	in in Remarks)		Sphagnum moss (D8) (LRR T, U)				
Field Observation	s:										
Surface water pres	ent? Yes	·	No _	X Depth	(inches)	_	Wetl	and hydrol	logy present?		
Water table presen	t? Yes	·	No	X Depth	(inches)	_					
Saturation present?	? Yes		No _	X Depth	(inches)	_	Yes	X	No		
(includes capillary f	ringe)										
Describe recorded	data (stream g	auge, monito	ring we	ell, aerial ph	otos, previous	inspections),	if availab	le:			
Remarks:											

nts.			Sampling Point: Plot 40			
Absolute	Dominant	Indicator	Dominance Test Worksheet			
% Cover	Species	Staus	Number of Dominant Species			
			that are OBL, FACW, or FAC:(A)			
			Total Number of Dominant			
			Species Across all Strata: 5 (B)			
			Percent of Dominant Species that are OBL, FACW, or FAC: 80.00% (A/B)			
			that are OBL, FACW, or FAC: 80.00% (A/B)			
			Prevalence Index Worksheet			
			Total % Cover of:			
	= Total Cove	<u></u>	OBL species 0 x 1 = 0			
			FACW species 90 x 2 = 180			
)			FAC species 50 x 3 = 150			
20	Υ	FAC	FACU species 25 x 4 = 100			
8	Y	FAC	UPL species 0 x 5 = 0			
2	N	FAC	Column totals 165 (A) 430 (B)			
2	N	FAC	Prevalence Index = B/A = 2.61			
			Hydrophytic Vegetation Indicators:			
			1 - Rapid test for hydrophytic vegetation			
			X 2 - Dominance test is >50%			
			X 3 - Prevalence index is ≤3.0*			
			4 - Morphogical adaptations* (provide			
20% c	of total cover	r: 6.4	supporting data in Remarks or on a			
)			separate sheet)			
90	Y	FACW	Problematic hydrophytic vegetation*			
15	<u>N</u>	FACU	(explain)			
5	<u>N</u>	FAC	*Indicators of hydric soil and wetland hydrology must be			
4	<u>N</u>	FAC	present, unless disturbed or problematic			
			Definitions of Four Vegetation Strata:			
			- W. J.			
			Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),			
			regardless of height.			
			Sapling/Shrub – Woody plants, excluding			
			vines, less than 3 in. DBH and greater than or			
			equal to 3.28 ft (1 m) tall			
114	- Total Cove		Herb – All herbaceous (non-woody) plants,			
			regardless of size, and woody plants less than 3.28			
1 20.00	A total core.		ft tall			
, 10	Υ	FACU	Woody Vine – All woody vines greater than 3.28 ft			
5	<u> </u>		in height.			
			, in the second			
2	N					
			Hydrophytic			
			Hydrophytic			
19 =	= Total Cove	۲r				
	=Total Cove of total cover		vegetation present? Yes X No			
	Absolute % Cover 20% c 20% c 32 22 32 32 35 4 114 57 20% c 10 52	Absolute % Cover Species = Total Cove 20% of total cover 20 Y 8 Y 2 N 2 N 2 N 15 N 5 N 4 N 10 Y 10 Y 20 Y 15 N 5 N 4 N	Absolute			

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r confi	rm the absence of ind	icators.)		
Depth	Matrix		Redo	ox Feature	s					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 2	10YR 4/3	100					silty clay loam			
2 - 6	10YR 4/2	39	10YR 5/8	2	С	PL	silty clay loam			
	10YR 4/3	59								
6 - 12	10YR 5/3	68	10YR 5/8	2	С	М	silty clay loam			
	10YR 5/2	30								
¹ Type: C = 0	Concentration D = D	enletion RM	1 = Reduced Matrix, I	MS = Masl	ked Sand	Grains	² l ocation: PL = Po	ore Lining, M = Matrix		
	Indicators:	opiotion, rav					Indicators for Problen			
Histisol			Polyvalue Below (LRR S, T, U)	Surrace (58)		1 cm Muck (A10) (I	-		
_	pipedon (A2)	•	Thin Dark Surface	ce (S9) (Li	RR S. T. L	J) .	2 cm Muck (A10) (I	*		
_	istic (A3)	-	Loamy Mucky M				Reduced Vertic (F1	-		
	en Sulfide (A4)	-	Loamy Gleyed N		- ,		(outside MLRA 15	,		
— · ·	d Layers (A5)	•	X Depleted Matrix	, ,		•	Piedmont Floodplai			
	Bodies (A6) (LRR P	P, T, U)	Redox Dark Sur	` '			(LRR P, S, T)	11 00113 (1 13)		
	ucky Mineral (A7) (L l		—— Depleted Dark S		')	•		Anomalous Bright Loamy Soils (F20)		
	resence (A8) (LRR L		Redox Depressi	•	•		(MLRA 153B)	Eddiny Collo (1 20)		
1 cm M	uck (A9) (LRR P. T)	•	Marl (F10) (LRR	(U)		•	Red Parent Materia	al (TF12)		
 Deplete	d Below Dark Surfac	e (A11)	Depleted Ochric	(F11) (ML	.RA 151)	•	Very Shallow Dark			
Thick D	ark Surface (A12)	•	—— Iron-Manganese	Masses (F12)	•	Other (explain in re	marks)		
Coast P	rairie Redox (A16)		(LRR O, P, T)	(,	•				
(MLRA		•	Umbric Surface	(F13) (LRI	R P, T, U)					
Sandy N	Mucky Mineral (S1)	•	Delta Ochric (F1	7) (MLRA	151)		2			
(LRR [°] O		•	Reduced Vertic	(F18) (ML I	RA 150A,	150E		³ Indicators of hydrophytic vegetation and weltand hydrology must be		
Sandy (Gleyed Matrix (S4)	•	Piedmont Flood	olain Soils	(F19) (M L	-RA 14	and weitand hydrology must be A) present, unless disturbed or			
Sandy F	Redox (S5)		Anomalous Brigl				problematic			
Stripped	d Matrix (S6)	-	(MLRA 149A, 1	53C, 153D)					
Dark Sເ	ırface (S7) (LRR P, S	S, T, U)								
Restrictive	Layer (if observed))•	I							
Type:	Layer (ii observed)	·•								
Depth (inch	es):			Hydric so	il present	t?	Yes X	No		
	<u> </u>				•					
Remarks:										

Project/Site	Moro Creek Mit	igation Bank		City/	County:	nty: Bunn S		Sampling Date: 2018/09/19			
Applicant/Owner:	Arkansas D	epartment of T	ranspo	ortatio	on State:	AR	Sampling P	oint:	Plot 42		
Investigator(s):	Kayti E	Ewing, Joe Led	vina		Section,	Γownship, R	lange:	T8S R14W	S24		
Landform (hillslope	, terrace, etc.):	n	one		Local relief	(concave, c	convex, none):	no	one		
Slope (%): 0	Lat:				Long:		Datum:	WG	SS84		
Soil Map Unit Name	e	Wehadkee	silt loa	am		NWI Clas	sification:	PFO1	IA		
Are climatic/hydrolo	ogic conditions of	the site typical f	for this	time o	of the year? Yes	X No _	(If no, e	explain in rer	narks)		
Are vegetation							re "normal circum	stances" pre	sent?		
Are vegetation	, soil	, or hydrolo	gy	nat	turally problemation		Yes X	_	<u></u>		
						-	f needed, explain	-	•		
SUMMARY OF FI		h site map sh	owing	samı	pling point loca	tions, trans	sects, important	t features, e	etc.		
Hydrophytic vegeta	•	Yes X	No_								
Hydric soil present?		Yes	No_		Is the sampled						
Wetland hydrology	present?	Yes	No_	Х	within a wetlar	ıd?	Yes	No	X		
Remarks: (Explain	alternative proced	dures here or in	a sepa	arate r	eport.)						
HYDROLOGY											
Wetland Hydrolog	v Indicators:					Sec	condary Indicators	(minimum c	of two required)		
Primary Indicators (is required; che	ck all tl	hat ap	ylq)	000	Surface Soil Cra	•	1 two required)		
Surface Water (•		`		_	Sparsely Vegeta		Surface (B8)		
	 · · · · · · · · · · · · · · · · · ·				its (B15) (LRR U)	<u> </u>	Drainage Patteri		Curiaco (Bo)		
Saturation (A3)	10 (112)	Hydrogen Sulfide Odor (C1)					Moss Trim Lines				
Water Marks (D1)						_	Dry-Season Wat		1		
Sediment Depos	•		Oxidiz Roots		iizospheres on Livi	ng <u> </u>	Crayfish Burrow	·	,		
Drift Deposits (B			_		Reduced Iron (C4	<u> </u>	Saturation Visible	-	nagery (C9)		
Algal Mat or Cru	•		_				X Geomorphic Position (D2)				
Iron Deposits (B			Recent Iron Reduction in Tilled Soils (C6)			ı <u>-</u>	Shallow Aquitard (D3)				
	ole on Aerial Image	erv (B7)	_ `	` '	Surface (C7)	_		AC-Neutral Test (D5)			
Water-Stained L	_		_		ain in Remarks)	_	Sphagnum moss (D8) (LRR T, U)				
Field Observation	s:						_				
Surface water pres		No	Χı	Depth	(inches)		Wetland hydr	rology preso	ent?		
Water table presen		No			(inches)			3, 1,,,,,			
Saturation present?		No		•	(inches)		Yes	No	X		
(includes capillary f		- <u>-</u>		•	` /						
Describe recorded	<u> </u>	ge, monitoring v	well, ae	erial ph	notos, previous in	spections), i	f available:		,		
	, 3	0	,		<i>,</i> ,	, ,,					
Remarks:											

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	Number of Dominant Species
1 Ilex opaca	35	Y	FAC	that are OBL, FACW, or FAC: 6 (A)
2 Nyssa sylvatica	20	<u> </u>	FAC	
3 Carpinus caroliniana	10		FAC	Total Number of Dominant
3 Carpinus caroliniana			FAC	Species Across all Strata: 7 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 85.71% (A/B)
6				
7				Prevalence Index Worksheet
8				Total % Cover of:
		Total Cove		OBL species x 1 = 0
50% of total cover:32	2.5 20% c	of total cover	r: 13	FACW species 0 x 2 = 0
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 210 x 3 = 630
1 Ilex opaca	60	Υ	FAC	FACU species 0 x 4 = 0
2 Carpinus caroliniana	25	<u> </u>	FAC	UPL species 0 x 5 = 0
3 Symplocos tinctoria	10	N	FAC	Column totals 210 (A) 630 (B)
4 Asimina triloba	5	N	FAC	Prevalence Index = B/A = 3.00
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				X 3 - Prevalence index is ≤3.0*
<u> </u>	100	Total Cove		
50% of total cover:		f total cove		4 - Morphogical adaptations* (provide
	20% C	i lolai covei		supporting data in Remarks or on a
)			separate sheet)
1 Carpinus caroliniana	10	<u>Y</u>	FAC	Problematic hydrophytic vegetation* (explain)
2 Ilex opaca	2	N	FAC	(explain)
3 Carex sp.	1	N		*Indicators of hydric soil and wetland hydrology must be
4				present, unless disturbed or problematic
5				Definitions of Four Vegetation Strata:
6				
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8				or more in diameter at breast height (DBH),
9				regardless of height.
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12				equal to 3.28 ft (1 m) tall
	13 :	Total Cove	r	Herb – All herbaceous (non-woody) plants,
50% of total cover: 6		of total cover		regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius)			ft tall
1 Vitis rotundifolia	20	Υ	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Rubus laudatus	10	<u>Y</u>		in height.
3 Bignonia capreolata	8		FAC	
4 Smilax rotundifolia	5		FAC	
5			170	
_				
6		Total Cave		Hydrophytic
500/ 51 1 1		Total Cove		vegetation
50% of total cover: 2	1.5 20% c	of total cover	:8.6	present?
Remarks: (Include photo numbers here or on a sepa	rate sheet)			

Sampling Point: Plot 42

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the inc	dicator o	r confi	rm the absence of inc	licators.)		
Depth	Matrix		Rede	ox Features	3					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 12	10YR 5/3	100					silty clay loam			
1- 0							2, ,, ,, ,,			
	Concentration, D = D	epletion, RM	I = Reduced Matrix,	MS = Mask	ed Sand	Grains		ore Lining, M = Matrix		
_	Indicators:		Polyvalue Below	v Surface (S8)		Indicators for Problem	-		
Histisol	• •	-	(LRR S, T, U)			,	1 cm Muck (A10) (·		
Histic E	ce (S9) (LF			2 cm Muck (A10) (LRR S)					
Black H	Loamy Mucky M		(LRR O)		Reduced Vertic (F					
Hydroge	Loamy Gleyed N	Matrix (F2)			(outside MLRA 15	60A, B)				
Stratifie	Depleted Matrix	` '			Piedmont Floodpla	in Soils (F19)				
Organic	face (F6)			(LRR P, S, T)						
5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark				Surface (F7)			Anomalous Bright Loamy Soils (F20)		
Muck Presence (A8) (LRR U) Redox Depres						į	(MLRA 153B)			
1 cm Muck (A9) (LRR P. T) Marl (F10) (LR				R U)		,	Red Parent Materia	al (TF12)		
Deplete	d Below Dark Surfac	e (A11)	Depleted Ochric	(F11) (ML	RA 151)	,	Very Shallow Dark	Surface (TF12)		
Thick D	ark Surface (A12)		Iron-Manganese	e Masses (F	- 12)	,	Other (explain in re	emarks)		
Coast F	Prairie Redox (A16)		(LRR O, P, T)							
(MLRA	150A)	·-	Umbric Surface	(F13) (LRF	R P, T, U))				
Sandy I	Mucky Mineral (S1)	-	Delta Ochric (F1	17) (MLRA	151)		31			
(LRR O	, S)	-	Reduced Vertic	. , .			 Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic 			
Sandy (Gleyed Matrix (S4)	-	Piedmont Flood	plain Soils	(F19) (M I	LRA 14				
Sandy F	Redox (S5)		Anomalous Brig							
Stripped	d Matrix (S6)	-	(MLRA 149A, 1	53C, 153D))					
Dark Su	urface (S7) (LRR P, \$	S, T, U)								
De edui edi ve	1 (if -b)		I							
	Layer (if observed)	:								
Type:						40	Vaa	No. Y		
Depth (inch	es):			Hydric soi	ı presen	ι?	Yes	No <u>X</u>		
Remarks:										

Project/Site	Moro Creek Mitig	ation Bank	Ci	ity/County:	Bunn	Samplin	ng Date:	2018/09/19		
Applicant/Owner:	Arkansas Dep	partment of	- Transporta	tion State:	AR	Samplin	g Point:	Plot 43		
Investigator(s):	Kayti Ev	ving, Joe Led	dvina	Section	n, Township,	Range:	T8S R	R14W S24		
Landform (hillslope,	terrace, etc.):		none	Local re	Local relief (concave, convex, none):					
Slope (%): 0	Lat:			Long:		Datum:		WGS84		
Soil Map Unit Name	<u> </u>	Wehadkee	e silt loam	_	NWI Cla	assification:		PFO1A		
Are climatic/hydrolo	gic conditions of th	ıe site typical	for this time	e of the year? Ye	s X No	(If n	o, explain	in remarks)		
Are vegetation				significantly distu		Are "normal circ	umstance	s" present?		
Are vegetation	, soil	, or hydrol	ogyr	naturally problem		Yes >		lo		
								swers in Remarks.)		
SUMMARY OF FI				mpling point lo	cations, tra	nsects, import	ant featu	res, etc.		
Hydrophytic vegeta	•	Yes X	No No	\dashv						
Hydric soil present?				Is the samp						
Wetland hydrology	present?	Yes X	No	within a wet	tland?	Yes X	N	lo		
HYDROLOGY										
Wetland Hydrolog	-				Se	-	•	num of two required)		
Primary Indicators (minimum of one is	required; che	eck all that a	apply)	-	Surface Soil		•		
Surface Water (A	•	_		auna (B13)	=			ncave Surface (B8)		
High Water Tabl	ter Table (A2) Marl Deposit				_	Drainage Pa		1)		
Saturation (A3)	Saturation (A3) Hydrogen Su) _	Moss Trim Li	ines (B16)			
Water Marks (B1	•		Oxidized !	Rhizospheres on I	Living _	Dry-Season		le (C2)		
Sediment Depos		_	Roots (C3		-	Crayfish Buri				
Drift Deposits (B	3)	_	Presence	of Reduced Iron ((C4)			erial Imagery (C9)		
Algal Mat or Cru			Recent In	on Reduction in Ti	lled _	X Geomorphic Position (D2)				
Iron Deposits (B	,	_	Soils (C6)	•	=	Shallow Aquitard (D3)				
	le on Aerial Imagery	(B7)		k Surface (C7)	-	X FAC-Neutral Test (D5)				
Water-Stained L	eaves (B9)		Other (Ex	plain in Remarks)		Sphagnum moss (D8) (LRR T, U)				
Field Observations										
Surface water prese	ent? Yes _	No	X Dep	oth (inches)		Wetland h	ydrology	present?		
Water table present	t? Yes	No	X Dep	oth (inches)	_					
Saturation present?	Yes _	No	X Dep	oth (inches)	_	Yes X	No			
(includes capillary fi	ringe)			_						
Describe recorded of	data (stream gauge), monitoring	well, aerial	photos, previous	inspections),	, if available:				
Remarks:										

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	Number of Dominant Species
1 Ilex opaca	10	' Y	FAC	that are OBL, FACW, or FAC: 3 (A)
2			<u> </u>	
	·			Total Number of Dominant
3				Species Across all Strata:5 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 60.00% (A/B)
6				
7				Prevalence Index Worksheet
8				Total % Cover of:
	10	Total Cove	r	OBL species10 x 1 =10
50% of total cover:	5 20% c	of total cover	: 2	FACW species 5 x 2 = 10
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 86 x 3 = 258
1 Baccharis halimifolia	20	Υ	FAC	FACU species 5 x 4 = 20
2 Symplocos tinctoria	5	N	FAC	UPL species 0 x 5 = 0
3 Liquidambar styraciflua	4	N	FAC	Column totals 106 (A) 298 (B)
4 Nyssa sylvatica	4	N	FAC	Prevalence Index = B/A = 2.81
5 Hamamelis virginiana	3	N	FACU	Hydrophytic Vegetation Indicators:
6 Callicarpa americana	2	N	FACU	1 - Rapid test for hydrophytic vegetation
7 Salix nigra	1	N	OBL	X 2 - Dominance test is >50%
8				3 - Prevalence index is ≤3.0*
	39	Total Cove		4. Marabaginal adaptations* (provide
50% of total cover: 1		of total cover		4 - Morphogical adaptations* (provide supporting data in Remarks or on a
Herb Stratum (Plot size: 1m ²)			separate sheet)
1 Lycopus sp.	15	Υ		Problematic hydrophytic vegetation*
2 Baccharis halimifolia	15	Υ	FAC	(explain)
3 Carex joorii	8		OBL	
4 Dichanthelium dichotomum	3		FAC	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
5 Boehmeria cylindrica	3		FACW	Definitions of Four Vegetation Strata:
6 Persicaria hydropiperoides			OBL	Deminions of Your Vegetation Strata.
7 Carex tribuloides	 _	N	FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8 Panicum verrucosum	<u> </u>	<u>N</u>	FACW	or more in diameter at breast height (DBH),
9	_ 		TACTI	regardless of height.
10				Sapling/Shrub – Woody plants, excluding
				vines, less than 3 in. DBH and greater than or
11				equal to 3.28 ft (1 m) tall
12	47	T-4-1 O		Herb – All herbaceous (non-woody) plants,
50% of total cover: 2		= Total Cove of total cover		regardless of size, and woody plants less than 3.28
	3.3 20 % C	n lotal cover	. 3.4	ft tall
Woody Vine Stratum (Plot size: 15-m radius 1 Rubus laudatus	<i>)</i>	V		
	80	<u>Y</u>		Woody Vine – All woody vines greater than 3.28 ft
2 Vitis rotundifolia	20	N	FAC	in height.
3 Smilax glauca	4	<u>N</u>	FAC	
Smilax rotundifolia	1	<u>N</u>	FAC	
5				
6				Hydrophytic
		Total Cove		vegetation
50% of total cover: 5	2.5 20% c	of total cover	: 21	present? Yes X No
Remarks: (Include photo numbers here or on a sepa	rate sheet)			

Sampling Point: Plot 43

Profile Des	cription: (Describe	to the depti	n needed to docum	nent the in	dicator o	r confi	rm the absence of ind	icators.)		
Depth	Matrix		Red	ox Feature	s					
(Inches)	es) Color (moist) % Col		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 4	10YR 4/2	78	10YR 5/8	2	С	PL	silty clay loam			
	10YR 4/3	20								
4 - 12	10YR 5/2	78	10YR 5/8	2	С	М	sandy clay			
	10YR 5/3	20								
¹ Type: C = (Concentration, D = D	enletion RM	= Reduced Matrix	MS = Masi	ed Sand	Grains	² I ocation: PI = Pi	ore Lining, M = Matrix		
	Indicators:	repletion, raivi					Indicators for Problem			
Histisol			Polyvalue Belov (LRR S, T, U)	w Surface (S8)		1 cm Muck (A10) (I	-		
	pipedon (A2)	-	Thin Dark Surfa	ice (S9) (I F	RSTI	n .	2 cm Muck (A10) (I	•		
_	istic (A3)	-	Loamy Mucky N					•		
	en Sulfide (A4)	-	Loamy Gleyed I		(=::::0)		Reduced Vertic (F1 (outside MLRA 15			
— · ·	d Layers (A5)	=	X Depleted Matrix	-		•				
	Bodies (A6) (LRR P	P. T. U)	Redox Dark Sur	, ,			Piedmont Floodplai (LRR P, S, T)	III 30IIS (F 19)		
	ucky Mineral (A7) (L l	-	— Depleted Dark S		')	-		(LRR P, S, T) Anomalous Bright Loamy Soils (F20)		
	resence (A8) (LRR L	_	Redox Depress	=	•		(MLRA 153B)	Loanly Cons (1 20)		
1 cm M	uck (A9) (LRR P. T)	-	 Marl (F10) (LRF							
 Deplete	d Below Dark Surfac	e (A11)	Depleted Ochrid	c (F11) (ML	RA 151)	•	Very Shallow Dark			
Thick D	ark Surface (A12)		— Iron-Manganese	e Masses (F12)	•	Other (explain in re	marks)		
Coast P	rairie Redox (A16)		(LRR O, P, T)	(,	•				
(MLRA		_	Umbric Surface	(F13) (LRI	R P, T, U)					
Sandy N	Mucky Mineral (S1)	_	Delta Ochric (F	17) (MLRA	151)		3			
(LRR O			Reduced Vertic	(F18) (MLI	RA 150A,	150E		³ Indicators of hydrophytic vegetation and weltand hydrology must be		
Sandy (Gleyed Matrix (S4)	_	Piedmont Flood	lplain Soils	(F19) (M I	_RA 14	A) present, unless disturbed or			
Sandy F	Redox (S5)		Anomalous Brig				problematic			
Stripped	d Matrix (S6)	_	(MLRA 149A, 1	53C, 153D)					
Dark Su	ırface (S7) (LRR P, \$	S, T, U)								
Restrictive	Layer (if observed)	\ <u>.</u>								
Туре:	_u , 0: (0.000:10u,	,-								
Depth (inch	es):			Hydric so	il presen	t?	Yes X	No		
Remarks:										

Project/Site	Moro Creek Mitig	jation Bank	Ci	ity/County:	Bunn	Sampling	Date:	2018/09/19		
Applicant/Owner:	Arkansas Dep	partment of	- Transporta	tion State:	AR	Sampling	Point:	Plot 44		
Investigator(s):	Kayti Ev	wing, Joe Le	dvina	Section	n, Township, f	Range:	T8S R1	14W S24		
Landform (hillslope,	, terrace, etc.):	!	none	Local re	lief (concave,	convex, none):		none		
Slope (%): 0	Lat:			Long:		Datum:		WGS84		
Soil Map Unit Name	<u> </u>	Wehadke	e silt loam		NWI Cla	ssification:	P	PFO1A		
Are climatic/hydrolo	gic conditions of the	ne site typica!	for this time	e of the year? Ye	s X No	(If no	, explain ir	n remarks)		
Are vegetation				significantly distu		Are "normal circui	mstances'	' present?		
Are vegetation	, soil	, or hydrol	ogyr	naturally problem		Yes X				
								wers in Remarks.)		
SUMMARY OF FI			nowing sa	mpling point lo	cations, trar	ısects, importa	nt featur	es, etc.		
Hydrophytic vegeta	· ·	Yes X	No	4						
Hydric soil present?		Yes X	No	Is the samp						
Wetland hydrology	present?	YesX	No	within a wet	iland?	Yes X	No	'		
HYDROLOGY	1									
Wetland Hydrolog	_	مام بام حدث	. I II th at	L. A	Se	-	•	um of two required)		
Primary Indicators (•	requirea; cn			_	Surface Soil C				
Surface Water (A	,	_		auna (B13)	_			cave Surface (B8)		
High Water Tabl	e (A2)	_		osits (B15) (LRR	_	Drainage Patte				
Saturation (A3)		Sulfide Odor (C1	_	Moss Trim Lin						
Water Marks (B1	•			Rhizospheres on I	∟iving _	Dry-Season W		(C2)		
Sediment Depos		_	Roots (C3		_	Crayfish Burro				
X Drift Deposits (B		_	Presence	of Reduced Iron (_			rial Imagery (C9)		
Algal Mat or Cru				on Reduction in Ti	lled _	X Geomorphic Position (D2)				
Iron Deposits (B	·	_	Soils (C6)		_	Shallow Aquita				
	le on Aerial Imagery	/ (B7)		k Surface (C7)	_	X FAC-Neutral T	` '			
X Water-Stained L	eaves (B9)	=	Other (Ex	plain in Remarks)	Remarks) Sphagnum moss (D8) (LRR T, U)					
Field Observations	s:									
Surface water prese	ent? Yes _	No	X Dep	oth (inches)		Wetland hy	drology p	resent?		
Water table present	t? Yes _	No	X Dep	oth (inches)						
Saturation present?	Yes _	No.	X Dep	oth (inches)	_	Yes X	No			
(includes capillary fi	ringe)									
Describe recorded of	data (stream gauge	∍, monitoring	well, aerial	photos, previous	inspections),	if available:				
Remarks:										

 VEGETATION -- Use scientific names of plants.
 Sampling Point:

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	Number of Dominant Species
1 Quercus phellos	80	Υ	FACW	that are OBL, FACW, or FAC: 3 (A)
2 Quercus nigra	10	N	FAC	Total Number of Dominant
3				Species Across all Strata: 3 (B)
4				Percent of Dominant Species
5	<u> </u>			that are OBL, FACW, or FAC: 100.00% (A/B)
6				(12)
7				Prevalence Index Worksheet
8				Total % Cover of:
<u> </u>	90	Total Cove		OBL species 0 x 1 = 0
50% of total cover:		of total cover		FACW species 125 x 2 = 250
Sapling/Shrub Stratun (Plot size: 15-m radius	1 2070 C	or total cover		FAC species 32 x 3 = 96
	_'	v	FACW	· — — — I
1 Quercus phellos	45	<u> </u>		
2 Acer rubrum		N	FAC	UPL species 0 x 5 = 0
3 Liquidambar styraciflua		<u>N</u>	FAC	Column totals 157 (A) 346 (B)
4 Diospyros virginiana	2	<u>N</u>	FAC	Prevalence Index = B/A = 2.20
5 Nyssa sylvatica	1	N	FAC	Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8	- <u></u>			X 3 - Prevalence index is ≤3.0*
	56:	=Total Cove	r	4 - Morphogical adaptations* (provide
	28 20% c	of total cover	: 11.2	supporting data in Remarks or on a
Herb Stratum (Plot size: 1m ²)			separate sheet)
1 None	_			Problematic hydrophytic vegetation*
2				(explain)
3				
1				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
5				Definitions of Four Vegetation Strata:
<u> </u>				Definitions of Four Vegetation Strata.
6				Tree Monday plants evaluating vines 2 in (7.6 am)
	· ——			Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),
8				regardless of height.
9				
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12				equal to 3.28 ft (1 m) tall
	:	=Total Cove	r	Herb – All herbaceous (non-woody) plants,
50% of total cover:	20% c	of total cover	T	regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius)			ft tall
1 Smilax rotundifolia	10	Υ	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Berchemia scandens	1	N	FAC	in height.
3				
4				
5				
6	- ——			
	11 :	Total Cove	·r	Hydrophytic
FOO/ of total acreas		of total cover		vegetation
50% of total cover:	5.5 20% c	or total cover	2.2	present? Yes X No No
Remarks: (Include photo numbers here or on a sepa	arate sheet)			

Plot 44

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the inc	dicator o	r conf	irm the absence of indi	cators.)		
Depth	Matrix		Redo	ox Features	3					
(Inches)	Color (moist)	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 4	10YR 5/2	98	7.5YR 5/8	2	С	PL	silty clay loam			
4 - 12	10YR 5/2	70	10YR 5/8	30	С	M	sandy clay			
¹ Type: C = 0	Concentration, D = D	epletion RM	I = Reduced Matrix. I	⊥ MS = Mask	ed Sand	Grains	s. ² l ocation: PL = Pc	ore Lining, M = Matrix		
	Indicators:	opionom, rav				Ordino	Indicators for Problem			
Histisol			Polyvalue Below (LRR S, T, U)	Surface (3	56)		1 cm Muck (A10) (L	_		
	pipedon (A2)	-	Thin Dark Surfac	ce (S9) (LR	R S, T, L	J)	2 cm Muck (A10) (L	-		
Black H	istic (A3)	-	 Loamy Mucky M			-	Reduced Vertic (F1	-		
Hydroge	en Sulfide (A4)	-	Loamy Gleyed N	/latrix (F2)			(outside MLRA 150	,		
Stratifie	d Layers (A5)	_	X Depleted Matrix	(F3)			Piedmont Floodplair	n Soils (F19)		
Organic	Bodies (A6) (LRR P	P, T, U)	Redox Dark Sur	face (F6)			(LRR P, S, T)			
5 cm M	ucky Mineral (A7) (L l	RR P, T, U)	Depleted Dark S	Surface (F7)		Anomalous Bright L	Anomalous Bright Loamy Soils (F20)		
	resence (A8) (LRR L	J) _	X Redox Depressi	• •			(MLRA 153B)			
	uck (A9) (LRR P. T)	-	Marl (F10) (LRR	•			Red Parent Materia	·		
	d Below Dark Surfac	e (A11)	Depleted Ochric	(F11) (ML	RA 151)		Very Shallow Dark	· ·		
	ark Surface (A12) Prairie Redox (A16)	_	Iron-Manganese (LRR O, P, T)	Masses (F	12)		Other (explain in re	marks)		
(MLRA	150A)	_	Umbric Surface	(F13) (LRF	R P, T, U))				
Sandy I	Mucky Mineral (S1)	_	Delta Ochric (F1	7) (MLRA	151)		³ Indicators of hydro	nhytia varatatian		
LRR O	•	-	Reduced Vertic	(F18) (MLF	RA 150A,	150E	and weltand hydrol			
	Gleyed Matrix (S4)	-	Piedmont Flood	olain Soils	(F19) (MI	LRA 14	49A) present, unless dist			
	Redox (S5)		Anomalous Brigl	•	,))	problematic			
	d Matrix (S6)		(MLRA 149A, 1	53C, 153D))					
Dark St	ırface (S7) (LRR P, \$	S, T, U)								
Restrictive	Layer (if observed)):								
Туре:										
Depth (inch	es):			Hydric soi	l presen	t?	Yes X	No		
Remarks:										

Project/Site	Moro Creek I	Mitigation Ba	nk	City/	County:	Bunn	S	ampling Dat	te: 2018/09/19		
Applicant/Owner:	Arkansas	Department	Department of Transportation				Sa	ampling Poi	nt: Plot 45		
Investigator(s):	Kay	ti Ewing, Joe	Ledvin	а	Section, Township, Range: T8S R14W S24						
Landform (hillslope	, terrace, etc.):		none)	Local reli	none					
Slope (%): 0	Lat:	-			Long:		D	atum:	WGS84		
Soil Map Unit Name	e	Wehad	dkee silt	loam		NWI Cla	ssificatio	n:	PFO1A		
Are climatic/hydrolo	gic conditions	of the site typ	oical for t	his time c	of the year? Yes	s <u>X</u> No		(If no, exp	plain in remarks)		
Are vegetation	, soil	, or hy	drology_	sig	nificantly distur	bed?	Are "norm	nal circumsta	ances" present?		
Are vegetation	, soil	, or hy	drology_	nat	urally problema	atic?	Υe	es <u>X</u>	No		
						((If needed	l, explain an	ny answers in Remarks.)		
SUMMARY OF FI		ach site ma	p showi	ing sam	oling point lo	cations, trai	nsects, i	mportant f	eatures, etc.		
Hydrophytic vegeta	· ·	Yes		10							
Hydric soil present?		Yes_		10	Is the sampl						
Wetland hydrology	present?	Yes_	<u>X</u> N	10	within a wet	land?	Yes_	<u> </u>	No		
Remarks: (Explain alternative procedures here or in a separate report.)											
HYDROLOGY											
Wetland Hydrolog	_					Se	econdary	Indicators (r	minimum of two required)		
Primary Indicators ((minimum of or	ne is required	; check a	all that ap	ply)	_	Surface Soil Cracks (B6)				
Surface Water (A1)				uatic Fau	* *	_	Spars	ely Vegetate	ed Concave Surface (B8)		
High Water Table (A2)					its (B15) (LRR	U) _	Draina	age Patterns	(B10)		
Saturation (A3)		drogen Sı	ulfide Odor (C1)	-	Moss	Trim Lines (B16)				
Water Marks (B	1)		Ox	idized Rh	izospheres on L	iving _	Dry-S	eason Water	Table (C2)		
Sediment Depos				oots (C3)		_		sh Burrows (
X Drift Deposits (B	•		Pre	Presence of Reduced Iron (C4)			Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Cru				Recent Iron Reduction in Tilled			X Geomorphic Position (D2)				
Iron Deposits (B	-	(DZ)		ils (C6)		=	Shallow Aquitard (D3)				
Inundation Visib		igery (B7)			Surface (C7)	_	X FAC-Neutral Test (D5)				
X Water-Stained L	.eaves (B9)		Ot	her (Expla	in in Remarks)		Sphagnum moss (D8) (LRR T, U)				
Field Observation	s:										
Surface water pres	ent? Yes	<u> </u>		C Depth	·	_	Wet	land hydrol	logy present?		
Water table presen	t? Yes	·	No _	C Depth	(inches)	_					
Saturation present?		<u> </u>	No	(Depth	(inches)	_	Yes _	X	No		
(includes capillary f	<u> </u>										
Describe recorded	data (stream g	auge, monito	ring well,	aerial ph	otos, previous	inspections),	if availab	le:			
Remarks:											

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	
1 Quercus nigra	50	Υ	FAC	Number of Dominant Species that are OBL, FACW, or FAC: 6 (A)
		<u> </u>		
2 Quercus phellos	30		FACW	Total Number of Dominant
3 Liquidambar styraciflua	10	<u>N</u>	FAC	Species Across all Strata:6 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC:(A/B)
6				
7				Prevalence Index Worksheet
8				Total % Cover of:
	90	Total Cove	r	OBL species 0 x 1 = 0
50% of total cover:	20% c	of total cover	: 18	FACW species 50 x 2 = 100
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 99 x 3 = 297
1 Carpinus caroliniana	25	Υ	FAC	FACU species 0 x 4 = 0
2 Quercus phellos	15	Υ	FACW	UPL species 0 x 5 = 0
3 Quercus michauxii	5		FACW	Column totals 149 (A) 397 (B)
4 Liquidambar styraciflua	5		FAC	Prevalence Index = B/A = 2.66
			FAC	
5 Quercus velutina	1	<u>N</u>		Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				X 3 - Prevalence index is ≤3.0*
		Total Cove		4 - Morphogical adaptations* (provide
50% of total cover: 25	5.5 20% c	of total cover	10.2	supporting data in Remarks or on a
Herb Stratum (Plot size: 1m ²)			separate sheet)
1 None				Problematic hydrophytic vegetation*
2				(explain)
3				-
1				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
5				
<u> </u>				Definitions of Four Vegetation Strata:
6				_ ,,, , , , , , , , , , , , , , , , , ,
/				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8				or more in diameter at breast height (DBH),
9				regardless of height.
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12				equal to 3.28 ft (1 m) tall
		Total Cove	r	Herb – All herbaceous (non-woody) plants,
50% of total cover:	20% c	of total cover	·•	regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius)			ft tall
1 Vitis rotundifolia	5	Υ	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Smilax rotundifolia		<u> </u>	FAC	in height.
3 Berchemia scandens	1	N	FAC	
4 Bignonia capreolata	1	N	FAC	
5				
6				Hydrophytic
	9 :	Total Cove	r	vegetation
50% of total cover: 4	.5 20% c	of total cover	1.8	present? Yes X No
Remarks: (Include photo numbers here or on a separ	rate sheet)			
·	•			

Sampling Point: Plot 45

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r confi	rm the absence of ind	licators.)			
Depth	Matrix		Redo	x Feature	S						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 2	10YR 5/3	98	10YR 6/8	2	С	M	silty clay loam				
2 - 8	10YR 5/2	88	10YR 6/8	2	С	PL	silty clay loam				
	10YR 6/1	10									
8 - 12	10YR 6/1	90	10YR 5/8	10	С	М	silty clay loam				
¹ Type: C = 0	Concentration, D = D	epletion, RM	I = Reduced Matrix, I	MS = Masł	ked Sand	Grains	. ² Location: PL = P	ore Lining, M = Matrix			
Hydric Soil	Indicators:		Polyvalue Below	Surface (S8)		Indicators for Probler	natic Hydric Soils ³ :			
Histisol	(A1)	-	(LRR S, T, U)				1 cm Muck (A10) (•			
Histic E	pipedon (A2)	-	Thin Dark Surfac				2 cm Muck (A10) (LRR S)			
	istic (A3)	-	Loamy Mucky M		(LRR O)		Reduced Vertic (F				
─ ' '	en Sulfide (A4)	-	Loamy Gleyed M	` '			(outside MLRA 15	0A, B)			
	d Layers (A5)		X Depleted Matrix	` '			Piedmont Floodpla	in Soils (F19)			
	Bodies (A6) (LRR P	-	Redox Dark Surf			-	(LRR P, S, T)				
	ucky Mineral (A7) (L l	-	Depleted Dark S	· ·)		Anomalous Bright	Loamy Soils (F20)			
	resence (A8) (LRR L	')	Marl (F10) (LRR	RR U) (MLRA 153B) Red Parent Material (TF12)							
_	uck (A9) (LRR P. T) d Below Dark Surfac	·ο (Λ11)	Depleted Ochric	•	PA 151)	-	Very Shallow Dark				
	ark Surface (A12)	·C (A11)			-		Other (explain in re	· ·			
			Iron-Manganese (LRR O, P, T)	iviasses (i	-12)	-	Other (explain in re	indiko)			
(MLRA	Prairie Redox (A16) 150A)	-	Umbric Surface	(F13) (LR F	R P. T. U)						
	Mucky Mineral (S1)	-	Delta Ochric (F1								
(LRR O		-	Reduced Vertic		-	150E		³ Indicators of hydrophytic vegetation and weltand hydrology must be A) present, unless disturbed or			
— `	Gleyed Matrix (S4)	-					and weltand hydrol (9 A) present unless dis				
Sandy F	Redox (S5)	-	—— Anomalous Brigh				problematic				
Stripped	d Matrix (S6)		(MLRA 149A, 1	-		,					
Dark Su	ırface (S7) (LRR P, \$	S, T, U)									
Postrictivo	Layer (if observed)										
Type:	Layer (II Observed)	•									
Depth (inch	es):			Hydric soi	il present	t?	Yes X	No			
Remarks:											

Project/Site	Moro Creek Miti	igation Bank	City/	/County: I	Bunn	Sampling Date:	2018/09/19					
Applicant/Owner:	Arkansas De	epartment of T	ransportatio	on State:	AR	Sampling Point:	Plot 46					
Investigator(s):	Kayti E	wing, Joe Led	lvina	Section, To	wnship, Range:	T8S F	R14W S24					
Landform (hillslope	, terrace, etc.):	n	one	Local relief (c	concave, convex	, none):	none					
Slope (%): 0	Lat:			Long:		Datum:	WGS84					
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Classificati	ion:	PFO1A					
Are climatic/hydrolo	ogic conditions of	the site typical	for this time of	of the year? Yes	X No	(If no, explain	in remarks)					
Are vegetation	, soil	, or hydrolo	ogysig	nificantly disturbed?	? Are "noi	rmal circumstance	s" present?					
Are vegetation	, soil	, or hydrolo	ogynat	turally problematic?			lo					
					•	· · · · · · · · · · · · · · · · · · ·	swers in Remarks.)					
			owing sam	pling point location	ons, transects,	, important featu	ires, etc.					
Hydrophytic vegeta	-	Yes X	No									
Hydric soil present?		Yes	No X	Is the sampled a								
Wetland hydrology	present?	Yes X	No	within a wetland	? Yes	<u> </u>	lo X					
Remarks: (Explain	Remarks: (Explain alternative procedures here or in a separate report.)											
HYDROLOGY												
Wetland Hydrolog	y Indicators:				Secondar	y Indicators (minir	num of two required)					
Primary Indicators	(minimum of one i	is required; che	ck all that ap	pply)		face Soil Cracks (B	• •					
Surface Water (A1)		Aquatic Fau	ına (B13)		Sparsely Vegetated Concave Surface						
High Water Tab	,		_	sits (B15) (LRR U)		inage Patterns (B10						
Saturation (A3)	()		_	ulfide Odor (C1)		ss Trim Lines (B16)						
Water Marks (B	1)		_			-Season Water Tab						
Sediment Depos	•		Roots (C3)	nizospheres on Living		yfish Burrows (C8)	.5 (02)					
Drift Deposits (E			_	Reduced Iron (C4)		uration Visible on A	erial Imagery (C9)					
Algal Mat or Cru	-		_			X Geomorphic Position (D2)						
Iron Deposits (B	•		Soils (C6)	Reduction in Tilled		llow Aquitard (D3)	quitard (D3)					
	ole on Aerial Image	ry (B7)	_ ` ′	Surface (C7)		X FAC-Neutral Test (D5)						
Water-Stained L	_		_	ain in Remarks)	Sphagnum moss (D8) (LRR T, U)							
Field Observation	<u> </u>		<u> </u>	<u> </u>	 _							
Surface water pres		No	X Depth	(inches)	l w	etland hydrology	nresent?					
Water table presen	-	No	X Depth	· · · · · · · · · · · · · · · · · · ·	1	filana nyarology	present:					
Saturation present?	-	No	X Depth	· ·	Yes	X No						
(includes capillary f	-		Deptil	(11101103)	163	<u> </u>						
		ae monitorina	well aerial nh	notos, previous insp	Lections) if avails	 able:						
Describe recorded	data (Stream gadį	ge, monitoring v	well, aeriai pi	iolos, previous irisp	ections), il availe	able.						
Remarks:												
rtomano.												

Sampling Point:

Plot 46

Profile Des	cription: (Describe	to the dept	h needed to docum	nent the inc	dicator o	r confi	rm the absence of in	dicators.)		
Depth	Matrix		Red	ox Features	3					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 12	10YR 4/3	98	7.5YR 5/8	2	С	М	silty clay loam			
¹ Type: C = 0	Concentration, D = D	epletion. RM	I = Reduced Matrix.	MS = Mask	ed Sand	Grains	s. ² Location: PL = I	Pore Lining, M = Matrix		
	Indicators:	,	Polyvalue Belov				Indicators for Proble			
Histisol			(LRR S, T, U)	v Suriace (c	30)		1 cm Muck (A10)	_		
_	pipedon (A2)	•	Thin Dark Surfa	ce (S9) (LF	RR S, T, I	J)	2 cm Muck (A10)	•		
_	istic (A3)	•	 Loamy Mucky M				Reduced Vertic (F			
—— Hydrog	en Sulfide (A4)	•	 Loamy Gleyed I	Matrix (F2)			(outside MLRA 1			
Stratifie	d Layers (A5)	•	Depleted Matrix	(F3)		·	Piedmont Floodpl	ain Soils (F19)		
Organio	Bodies (A6) (LRR P	P, T, U)	Redox Dark Sur	face (F6)			(LRR P, S, T)	um como (r. 10)		
5 cm M	ucky Mineral (A7) (L l	RR P, T, U)	Depleted Dark S	Surface (F7)	•	Anomalous Bright	Anomalous Bright Loamy Soils (F20)		
Muck P	resence (A8) (LRR L	J)	Redox Depress	ions (F8)			(MLRA 153B)	(MLRA 153B)		
1 cm M	uck (A9) (LRR P. T)		Marl (F10) (LRF	R U)			Red Parent Mater	ial (TF12)		
Deplete	d Below Dark Surfac	e (A11)	Depleted Ochric	(F11) (ML	RA 151)		Very Shallow Dar	k Surface (TF12)		
Thick D	ark Surface (A12)		Iron-Manganese	e Masses (F	F12)		Other (explain in r	remarks)		
Coast F	Prairie Redox (A16)		(LRR O, P, T)							
(MLRA	150A)		Umbric Surface	(F13) (LRF	R P, T, U))				
Sandy I	Mucky Mineral (S1)		Delta Ochric (F1	17) (MLRA	151)		³ Indicators of byd	conhytic vegetation		
LRR O	•	•	Reduced Vertic				and weltand hydro	³ Indicators of hydrophytic vegetation and weltand hydrology must be		
	Gleyed Matrix (S4)		Piedmont Flood	plain Soils	(F19) (M I	LRA 14	9A) present, unless disturbed or			
	Redox (S5)		Anomalous Brig	-))	problematic			
	d Matrix (S6)		(MLRA 149A, 1	53C, 153D))					
Dark St	ırface (S7) (LRR P, S	S, T, U)								
Restrictive	Layer (if observed)):								
Туре:										
Depth (inch	es):			Hydric soi	l presen	t?	Yes	No X		
Remarks:							· · · · · · · · · · · · · · · · · · ·			
Remarks.										

Project/Site	Moro Creek Mit	igation Bank		City/	County:	Bunn	Sampling I	Sampling Date: 201			
Applicant/Owner:	Arkansas De	epartment of T	partment of Transportation		on State:	AR	Sampling F	oint:	Plot 47		
Investigator(s):	Kayti E	wing, Joe Led	vina		Section,	Township, f	Range:	T8S R14\	W S24		
Landform (hillslope	, terrace, etc.):	n	one		Local relie	f (concave,	convex, none):		none		
Slope (%): 0	Lat:				Long:		Datum:	V	VGS84		
Soil Map Unit Name	e	Wehadkee	silt loa	am		NWI Cla	ssification:	PF	O1A		
Are climatic/hydrological	ogic conditions of	the site typical	for this	time o	of the year? Yes	X No	(If no,	explain in r	emarks)		
Are vegetation	, soil	, or hydrolo	ogy	sig	nificantly disturbe	ed?	Are "normal circum	ıstances" p	resent?		
Are vegetation	, soil	, or hydrolo	ogy	nat	turally problemati		Yes X				
							(If needed, explain	-	•		
SUMMARY OF FI		h site map sh	owing	samı	pling point loca	tions, trar	ısects, importan	t features	, etc.		
Hydrophytic vegeta	-	Yes X	No_								
Hydric soil present		Yes		X	Is the sample						
Wetland hydrology	present?	Yes	No	Х	within a wetla	nd?	Yes	No	X		
Remarks: (Explain alternative procedures here or in a separate report.)											
HYDROLOGY											
Wetland Hydrolog	y Indicators:					Se	econdary Indicators	s (minimum	of two required)		
Primary Indicators	(minimum of one i	is required; che	eck all that apply)			_	Surface Soil Cracks (B6)				
Surface Water (A1)	Aquatic Fauna (B13)			_	Sparsely Vegetated Concave Surface (B8)					
High Water Tab		Depos	its (B15) (LRR U) _	Drainage Patter	rns (B10)					
Saturation (A3)			_ Hydro	gen S	ulfide Odor (C1)	_	Moss Trim Line	s (B16)			
Water Marks (B	1)		Oxidiz	zed Rh	izospheres on Liv	ing _	Dry-Season Wa	ater Table (0	C2)		
Sediment Depos	sits (B2)		Roots	(C3)		_	Crayfish Burrow	vs (C8)			
Drift Deposits (E	33)		Presence of Reduced Iron (C4)				Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Cru	ıst (B4)		Recent Iron Reduction in Tilled			d _	X Geomorphic Position (D2)				
Iron Deposits (B	55)		_Soils ((C6)		_	Shallow Aquitard (D3)				
Inundation Visib	le on Aerial Image	ry (B7)	Thin M	Muck S	Surface (C7)	_	FAC-Neutral Test (D5)				
Water-Stained L	eaves (B9)		Other	(Expla	ain in Remarks)	_	Sphagnum moss (D8) (LRR T, U)				
Field Observation	s:										
Surface water pres		No	X	Depth	(inches)		Wetland hyd	rology pre	esent?		
Water table presen	t? Yes	No	X	Depth	(inches)						
Saturation present?	? Yes	No	X	Depth	(inches)	<u> </u>	Yes	No	X		
(includes capillary f	ringe)					•					
Describe recorded	data (stream gau	ge, monitoring v	well, ac	erial ph	notos, previous in	spections),	if available:				
Remarks:											
could pass the	FAC-neutral to	est, dependi	ng on	unk	nown Carex, i	unknown	forb, and Rubi	us laudat	us (no status)		

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 47 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover **Species** Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) **Percent of Dominant Species 75.00%** (A/B) that are OBL, FACW, or FAC: **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **0** x 1 = 20% of total cover: **FACW** species 50% of total cover: 1 x 2 =2 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species 172 x 3 = 516 1 Liquidambar styraciflua FACU species **FAC** x 4 =0 Symplocos tinctoria **FAC UPL** species x 5 = 0 Column totals **173** (A) **518** (B) Prevalence Index = B/A = 2.99 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation X 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0* 75 = Total Cover 4 - Morphogical adaptations* (provide 50% of total cover: 37.5 20% of total cover: 15 supporting data in Remarks or on a Herb Stratum (Plot size: separate sheet) Problematic hydrophytic vegetation* 1 Liquidambar styraciflua **FAC** (explain) Carex tribuloides **FACW** 1 Carex sp. Ν *Indicators of hydric soil and wetland hydrology must be 1 Unknown forb Ν present, unless disturbed or problematic 5 **Definitions of Four Vegetation Strata:** Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall = Total Cover Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: **19.6** (Plot size: 15-m radius Woody Vine Stratum Rubus laudatus Woody Vine – All woody vines greater than 3.28 ft 60 Vitis rotundifolia **FAC** 3 4 5 Hydrophytic 62 = Total Cover vegetation Yes X No 20% of total cover: **12.4** present? 50% of total cover: 31 Remarks: (Include photo numbers here or on a separate sheet)

Profile Des	cription: (Describe	to the dept	h needed to docum	nent the inc	dicator o	r confi	irm the absence of inc	dicators.)			
Depth	Matrix		Red	ox Features	3						
(Inches) Color (moist) %		Color (moist)	% Type ¹ Lo			Texture	Remarks				
0 - 12	10YR 5/4	100					silty clay loam				
1 _{T.max} C = 4	Concentration D = D	anlation DM	L = Dadward Matrix	MC - Mool	rad Cand	Crains	21 costion: D1 = D	Dara Lining M - Matrix			
	Concentration, D = D	epielion, Riv				Grains		Pore Lining, M = Matrix			
_	Indicators:		Polyvalue Below	v Surface (S8)		Indicators for Problem	-			
Histisol	• •	-	(LRR S, T, U)	(CO) (LF	DC TI		1 cm Muck (A10) (•			
	pipedon (A2)	-	Thin Dark Surfa				2 cm Muck (A10) (•			
	istic (A3)	-	Loamy Mucky M		(LKK U)			Reduced Vertic (F18) (outside MLRA 150A, B)			
	en Sulfide (A4)	-	Loamy Gleyed N	, ,		•					
	d Layers (A5)	. 	Depleted Matrix	, ,				Piedmont Floodplain Soils (F19)			
	: Bodies (A6) (LRR P ucky Mineral (A7) (L l	-	Redox Dark Sur		`		(LRR P, S, T)				
	Depleted Dark S Redox Depressi	•)			Anomalous Bright Loamy Soils (F20) (MLRA 153B)					
	resence (A8) (LRR U uck (A9) (LRR P. T)	·' -	Marl (F10) (LRF			,	 '	Red Parent Material (TF12)			
	d Below Dark Surfac	- 	Depleted Ochric	•	DA 151\	i	Very Shallow Dark				
	ark Surface (A12)	e (ATT)			-	i	Other (explain in re	· ·			
			Iron-Manganese (LRR O, P, T)	e Masses (F	-12)	,	Other (explain in re	iliaiks)			
Coast F (MLRA	Prairie Redox (A16)	-	Umbric Surface	(E13) (I D E							
	-	-	Delta Ochric (F1								
Sandy I (LRR O	Mucky Mineral (S1)	-	Reduced Vertic		-	1505	³ Indicators of hydrophytic vegetation				
	Gleyed Matrix (S4)	-		. , .			and weltand hydro	and weltand hydrology must be			
	Redox (S5)	-					present, unless dis problematic	A) present, unless disturbed or			
	d Matrix (S6)		Anomalous Brig (MLRA 149A, 1	-))	problematio				
	urface (S7) (LRR P, \$	S T II)	(MEIXA 145A, 1	000, 1000	,						
Bank oc	anace (O7) (ERRY),	J, I, U)									
Restrictive	Layer (if observed)	:									
Type:											
Depth (inch	es):			Hydric soil present?			Yes	No <u>X</u>			
Remarks:											
ixemaiks.											

Project/Site	Moro Creek Mitigation Bank		City/	County:	Bunn	Sampling	Date: 20	18/09/19		
Applicant/Owner:	Arkansas Department of Transportat		ransportatio	n State:	AR	Sampling I	Point: F	Plot 41		
Investigator(s):	Kayti E	wing, Joe Led	vina	Section, T	ownship, Rang	T8S R14W S	24			
Landform (hillslope	, terrace, etc.):	n	one	Local relief	(concave, conv	vex, none):	nor	10		
Slope (%): 0	Lat:			Long:		Datum:	WGS	84		
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Classifi	cation:	PFO1A	4		
Are climatic/hydrolo	ogic conditions of	the site typical	for this time o	of the year? Yes _	X No	(If no,	explain in rema	arks)		
Are vegetation	, soil X	$\frac{1}{2}$, or hydrological	ogysigr	nificantly disturbed	d? Are "	normal circun	mstances" prese	ent?		
Are vegetation	, soil	, or hydrolo	ogynati	urally problematio		Yes X	_	_		
					· ·		n any answers i	· ·		
SUMMARY OF FI			owing samp	oling point locat	tions, transec	ts, importar	nt features, et	c.		
Hydrophytic vegeta	•	Yes X	No							
Hydric soil present?		Yes X	No	Is the sampled						
Wetland hydrology	present?	Yes X	No	within a wetlan	ıd? Y	es X	No			
Remarks: (Explain	Remarks: (Explain alternative procedures here or in a separate report.)									
HYDROLOGY										
Wetland Hydrolog	y Indicators:				Secon	dary Indicator	rs (minimum of	two required)		
Primary Indicators ((minimum of one i	s required; che	ck all that app	ply)		•	ce Soil Cracks (B6)			
Surface Water (A1)		Aquatic Faur	na (B13)			tated Concave S	Surface (B8)		
High Water Tabl	,		_	its (B15) (LRR U)			inage Patterns (B10)			
Saturation (A3)	()	·	_	ulfide Odor (C1)		_	ss Trim Lines (B16)			
Water Marks (B	1)		_			Dry Coscon Water Table (C2)				
Sediment Depos	•		Roots (C3)	izospheres on Livir	9	Crayfish Burrows (C8)				
Drift Deposits (B		·	_	Reduced Iron (C4)		Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Cru	-	·	_		<u></u>	X Geomorphic Position (D2)				
Iron Deposits (B	` '		Soils (C6)	Reduction in Tilled		Shallow Aquitard (D3)				
	le on Aerial Imager	ry (B7)	Thin Muck S	urface (C7)		X FAC-Neutral Test (D5)				
Water-Stained L	_		_	in in Remarks)			ss (D8) (LRR T,	U)		
Field Observation				·						
Field Observation Surface water present		No	X Depth	(inches)		Watland by	drology presen	·+2		
Water table present	-	No	X Depth	· · · · · · · · · · · · · · · · · · ·		welland nyc	ilology presen	itr		
Saturation present?	-	No	X Depth	· · · · · · · · · · · · · · · · · · ·	Ye	s X	No			
(includes capillary f	-		Deptil	(IIICHES)	16	• <u> </u>	NO	_		
Describe recorded			well aerial nh	notos previous ins	enections) if a	vailable:				
Describe recorded	uata (Stream gaug	je, monitoring v	veii, aeriai pri	lotos, previous iris	speciions), ii av	allable.				
Remarks:										
remarks.										

Sampling Point:

Plot 41

Profile Des	cription: (Describe	to the depti	n needed to docum	ent the inc	dicator o	r confi	irm the absence of indi	cators.)				
Depth	Matrix		Rede	ox Features	3							
(Inches)			Color (moist)	% Type ¹ Loc ²			Texture	Remarks				
0 - 3	10YR 4/2	49	10YR 5/8	2	С	PL	silty clay loam					
	10YR 5/2	49										
3 - 10	10YR 5/3	30	10YR 5/8	2	С	М	silty clay loam					
	10YR 5/2	68										
¹ Type: C = 0	Concentration, D = D	epletion RM	= Reduced Matrix	MS = Mask	ed Sand	Grains	s. ² l ocation: PL = Pc	ore Lining, M = Matrix				
	Indicators:					0.0	Indicators for Problem					
Histisol			Polyvalue Below (LRR S, T, U)	v Suriace (s	56)			1 cm Muck (A10) (LRR O)				
	pipedon (A2)	-	Thin Dark Surfa	ce (S9) (LR	R S, T, U	J)		2 cm Muck (A10) (LRR S)				
Black H	istic (A3)	_	 Loamy Mucky M			-		Reduced Vertic (F18)				
Hydroge	en Sulfide (A4)	-	Loamy Gleyed N	Matrix (F2)			(outside MLRA 150A, B)					
Stratifie	d Layers (A5)		X Depleted Matrix	(F3)			— Piedmont Floodplain Soils (F19)					
Organic	Bodies (A6) (LRR P	P, T, U)	Redox Dark Sur	face (F6)			(LRR P, S, T)					
5 cm Mı	ucky Mineral (A7) (L l	RR P, T, U) _	Depleted Dark S	Surface (F7)		Anomalous Bright Loamy Soils (F20)					
	resence (A8) (LRR L	ገ) _	Redox Depressi	, ,			(MLRA 153B)					
	uck (A9) (LRR P. T)	-	Marl (F10) (LRR	•			Red Parent Materia					
	d Below Dark Surfac	ce (A11)	Depleted Ochric	(F11) (ML	RA 151)		Very Shallow Dark	•				
	ark Surface (A12) rairie Redox (A16)	<u>-</u>	Iron-Manganese (LRR O, P, T)									
(MLRA	150A)	_	Umbric Surface	e (F13) (LRR P, T, U)								
-	Mucky Mineral (S1)	-	Delta Ochric (F1		-		³ Indicators of hydro	³ Indicators of hydrophytic vegetation				
LRR O	•	_	Reduced Vertic				and weltand hydrology must be					
	Gleyed Matrix (S4)	-	Piedmont Flood	plain Soils	(F19) (M I	_RA 14	· procent, amose distarbed of					
	Redox (S5)		Anomalous Brig)	problematic					
	d Matrix (S6)	- T IIV	(MLRA 149A, 1	53C, 153D))							
— Dark Su	ırface (S7) (LRR P, \$	5, 1, 0)										
Restrictive	Layer (if observed)):										
Type:												
Depth (inche	es):		_	Hydric soi	l presen	t?	Yes X	No				
Remarks:			dis	turbed soi	ls							
			uio	iturbou oor	.0							

Project/Site	Moro Creek M	itigation Ba	ınk	City/	/County:	Bunn	Sampling Date	e: 2018/09/19			
Applicant/Owner:	Arkansas [Department	of Tran	sportatio	on State:	AR	Sampling Poir	nt: Plot 48			
Investigator(s):	Kayti	Ewing, Joe	Ledvin	а	Section,	Township, R	Range: T	8S R14W S24			
Landform (hillslope	, terrace, etc.):		none)	Local relie	f (concave, d	convex, none):	none			
Slope (%): 0	Lat:				Long:		Datum:	WGS84			
Soil Map Unit Name	e	Wehad	dkee silt	loam		NWI Clas	ssification:	PFO1A			
Are climatic/hydrolo	gic conditions c	of the site typ	oical for t	this time o	of the year? Yes	X No	(If no, exp	olain in remarks)			
Are vegetation	, soil	, or hy	drology_	sig	nificantly disturbe	ed? A	re "normal circumsta	nces" present?			
Are vegetation	, soil	, or hy	drology_	nat	turally problemati	ic?	Yes X	No			
						· ·	•	y answers in Remarks.)			
		ch site ma	p show	ing sam	pling point loca	ations, tran	sects, important fe	eatures, etc.			
Hydrophytic vegeta		Yes		No							
Hydric soil present		Yes	^	No X	Is the sample						
Wetland hydrology	present?	Yes_	<u>X</u> N	No	within a wetla	nd?	Yes	No <u>X</u>			
Remarks: (Explain	Remarks: (Explain alternative procedures here or in a separate report.)										
HYDROLOGY											
Wetland Hydrolog	y Indicators:					Sec	condary Indicators (m	ninimum of two required)			
Primary Indicators	_	e is required	; check a	all that ap	ylq)	000	Surface Soil Crack				
Surface Water (•		-		_	Sparsely Vegetated Concave Surface (B8				
High Water Tab	ŕ		Aquatic Fauna (B13) Marl Deposits (B15) (LRR U)			<u> </u>	Drainage Patterns (B10)				
Saturation (A3)	e (A2)		Hydrogen Sulfide Odor (C1)			_	Moss Trim Lines (B16)				
Water Marks (B	1\					_	Dry-Season Water Table (C2)				
Sediment Depos	•		Oxidized Rhizospheres on Living Roots (C3)			ring <u> </u>	Crayfish Burrows (C8)				
Drift Deposits (E			Presence of Reduced Iron (C4)			4)	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Cru	•						X Geomorphic Position (D2)				
Iron Deposits (B			Recent Iron Reduction in Tilled Soils (C6)			d <u>-</u>	Shallow Aquitard (D3)				
	ile on Aerial Imag	ery (R7)	Thin Muck Surface (C7)			_	X FAC-Neutral Test (D5)				
Water-Stained L	_	Ciy (Di)	Other (Explain in Remarks)				Sphagnum moss (D8) (LRR T, U)				
				ilei (Expia	alli ili Nelliaiks)		— Opriagram moss (E	——————————————————————————————————————			
Field Observation			_	_							
Surface water pres				X Depth	· ·	-	Wetland hydrole	ogy present?			
Water table presen				X Depth		-					
Saturation present?			No _	X Depth	(inches)	-	Yes X	No			
(includes capillary f											
Describe recorded	data (stream ga	uge, monito	ring well	, aerial ph	notos, previous ir	ispections), i	if available:				
Remarks:											
	Passe	s FAC-ne	utral te	est if Ru	ibus laudatus	is acting	as hydrophyte.				

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	
1	70 0010.	0,000.00	01000	Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)
·				
2				Total Number of Dominant
3				Species Across all Strata: (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 80.00% (A/B)
6	<u></u>			
7				Prevalence Index Worksheet
8	· <u></u>			Total % Cover of:
		Total Cove	r	OBL species 2 x 1 = 2
50% of total cover:		of total cover		FACW species 101 x 2 = 202
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 70 x 3 = 210
1 Diospyros virginiana	30	Υ	FAC	FACU species 0 x 4 = 0
	8			<u> </u>
2 Ilex opaca			FAC	
3 Baccharis halimifolia	2	<u>N</u>	FAC	Column totals <u>173</u> (A) <u>414</u> (B)
4 Symplocos tinctoria	1	<u>N</u>	FAC	Prevalence Index = B/A = 2.39
5				Hydrophytic Vegetation Indicators:
6	<u></u>			1 - Rapid test for hydrophytic vegetation
7	· <u></u>			X 2 - Dominance test is >50%
8				X 3 - Prevalence index is ≤3.0*
	41 :	Total Cove		
50% of total cover: 2		of total cover		4 - Morphogical adaptations* (provide
Herb Stratum (Plot size: 1m ²	1 2070 0	n total oovo		supporting data in Remarks or on a separate sheet)
	,	V	E A C)A/	Problematic hydrophytic vegetation*
1 Panicum verrucosum	100	<u>Y</u>	FACW	
2 Persicaria hydropiperoides	2	N	OBL	(explain)
3 Rhexia mariana	1	N	FACW	*Indicators of hydric soil and wetland hydrology must be
4				present, unless disturbed or problematic
5				Definitions of Four Vegetation Strata:
6	· <u></u>			
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8				or more in diameter at breast height (DBH),
9				regardless of height.
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
	·			equal to 3.28 ft (1 m) tall
12				·
		= Total Cove		Herb – All herbaceous (non-woody) plants,
	1.5 20% c	of total cove	20.6	regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius)			ft tall
1 Rubus laudatus	20	<u> </u>		Woody Vine – All woody vines greater than 3.28 ft
2 Vitis rotundifolia	15	Υ	FAC	in height.
3 Smilax glauca	12	<u> </u>	FAC	
4 Smilax rotundifolia	2		FAC	
5	·			
6				
	40	- Total Carr		Hydrophytic
		= Total Cove		vegetation
50% of total cover: 2	4.5 20% c	of total cove	9.8	present? Yes X No No
Remarks: (Include photo numbers here or on a sepa	rate sheet)			

Sampling Point: Plot 48

Profile Des		to the depti				r confi	rm the absence of ind	icators.)				
Depth	Matrix		ox Features		^							
(Inches)	hes) Color (moist) %		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks				
0 - 12	10YR 5/3	100					silty clay loam					
¹ Type: C =	Concentration, D = D	epletion, RM	= Reduced Matrix,	MS = Mask	ed Sand	Grains	s. ² Location: PL = Po	ore Lining, M = Matrix				
Hydric Soi	Hydric Soil Indicators: Polyvalue Belov						Indicators for Problem	-				
Histisol	(A1)	-	(LRR S, T, U)				1 cm Muck (A10) (LRR O)					
	pipedon (A2)	_	Thin Dark Surfa				2 cm Muck (A10) (LRR S)					
	listic (A3)	-	Loamy Mucky M		(LRR O))	Reduced Vertic (F18)					
— · ·	en Sulfide (A4)	-	Loamy Gleyed N	, ,			(outside MLRA 150A, B)					
	ed Layers (A5)		Depleted Matrix	` '			Piedmont Floodplain Soils (F19)					
	Bodies (A6) (LRR F	_	Redox Dark Sur		١	•	(LRR P, S, T)					
	ucky Mineral (A7) (L resence (A8) (LRR (_	Depleted Dark S Redox Depressi	•)		Anomalous Bright Loamy Soils (F20) (MLRA 153B)					
_	uck (A9) (LRR P. T)	<u>-</u>	Marl (F10) (LRR	, ,			Red Parent Materia	al (TF12)				
_	ed Below Dark Surface	e (A11)	Depleted Ochric	•	RA 151)	•	Very Shallow Dark					
	ark Surface (A12)	_	' Iron-Manganese		-	i	Other (explain in re					
	Prairie Redox (A16)		(LRR O, P, T)									
(MLRA		-	Umbric Surface	ace (F13) (LRR P, T, U)								
Sandy	Mucky Mineral (S1)	<u>-</u>	Delta Ochric (F1	7) (MLRA	151)		3					
(LRR C		_	Reduced Vertic	(F18) (MLF	RA 150A	, 150E	³ Indicators of hydrophytic vegetation and weltand hydrology must be					
Sandy	Gleyed Matrix (S4)	_	Piedmont Flood	plain Soils	(F19) (M	LRA 14	49A) present, unless disturbed or problematic					
	Redox (S5)		Anomalous Brig	-	•))						
	d Matrix (S6)	<u> </u>	(MLRA 149A, 1	53C, 153D)								
Dark Si	urface (S7) (LRR P, \$	S, T, U)										
Restrictive	Layer (if observed)):										
Type:												
Depth (inch	es):			Hydric soi	l presen	t?	Yes	No <u>X</u>				
Remarks:												

Project/Site	Moro Creek N	litigation Ba	nk	City/0	County:	Bunn	Sa	mpling Date	2018/09/19			
Applicant/Owner:	Arkansas	Department	of Trans	_ portatio	n State:	AR	Sa	mpling Point	:: Plot 49			
Investigator(s):	Kayt	i Ewing, Joe	Ledvina		Section,	Township, F	Range:	T8	S R14W S24			
Landform (hillslope	, terrace, etc.):		none		Local relie	f (concave,	convex, no	one):	none			
Slope (%): 0	Lat:				Long:		Da	tum:	WGS84			
Soil Map Unit Name	e	Wehad	lkee silt l	loam		NWI Cla	ssification		PFO1A			
Are climatic/hydrolo	gic conditions	of the site typ	ical for th	is time o	f the year? Yes	X No		(If no, expl	ain in remarks)			
Are vegetation	, soil	, or hyd	drology	sign	nificantly disturbe	ed? A	Are "norma	al circumstar	nces" present?			
Are vegetation	, soil	, or hyd	drology	natı	urally problemati	ic?	Yes	X	No			
						(If needed,	explain any	answers in Remarks.)			
SUMMARY OF FI		ach site mar	p showir	ng samp	oling point loca	ations, trar	nsects, in	portant fea	atures, etc.			
Hydrophytic vegeta	-		X No	·								
Hydric soil present? Yes_			X No	·	Is the sample							
Wetland hydrology	present?	Yes	X No	o	within a wetla	nd?	Yes	X	No			
Remarks: (Explain	alternative proc	edures here	or in a se	parate re	eport.)							
HYDROLOGY												
Wetland Hydrolog	y Indicators:					Se	condary Ir	ndicators (mi	inimum of two required)			
Primary Indicators	(minimum of on	e is required;	check all	I that app	oly)	_	Surface	Surface Soil Cracks (B6)				
Surface Water (A1)		Aqu	ıatic Faun	na (B13)	Sparse	_Sparsely Vegetated Concave Surface (B8)					
High Water Tab	le (A2)		Marl Deposits (B15) (LRR U)			_	Drainage Patterns (B10)					
Saturation (A3)			Hydrogen Sulfide Odor (C1)			_	Moss Trim Lines (B16)					
Water Marks (B	1)		Oxidized Rhizospheres on Living			rina _	Dry-Season Water Table (C2)					
Sediment Depos	sits (B2)		Roots (C3)			_	Crayfish Burrows (C8)					
X Drift Deposits (E	33)		Pres	sence of	Reduced Iron (C	4)	Saturation Visible on Aerial Imagery (C9)					
Algal Mat or Cru	ıst (B4)		Recent Iron Reduction in Tilled			d _	X Geomorphic Position (D2)					
Iron Deposits (B	5)		Soils (C6)			_	Shallow Aquitard (D3)					
Inundation Visib	le on Aerial Ima	gery (B7)	Thin Muck Surface (C7)				X FAC-Neutral Test (D5)					
X Water-Stained L	eaves (B9)		Other (Explain in Remarks)				Sphagnum moss (D8) (LRR T, U)					
Field Observation	s:											
Surface water pres			No X	Depth ((inches)		Wetla	nd hvdrolo	gy present?			
Water table presen				Depth (-		,	37 p			
Saturation present?				Depth (-	Yes	X I	No			
(includes capillary f					(-						
Describe recorded	<u> </u>	auge, monitor	ina well. a	aerial ph	otos, previous ir	spections).	if available	e:				
	, 5	J ,	J ,	•	,,	' '						
Remarks:												
ĺ												

_	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	
1 Liquidambar styraciflua	40	Υ	FAC	Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)
2 Quercus nigra	12	<u> </u>	FAC	
3 Acer rubrum	8	N	FAC	Total Number of Dominant Species Across all Strata: 5 (B)
4 Quercus michauxii	5	N	FACW	``
		N	FACW	Percent of Dominant Species
5				that are OBL, FACW, or FAC:(A/B)
6				Prevalence Index Worksheet
0				
8		T-4-1 O		Total % Cover of:
FOO/ of total covers		= Total Cove of total cover		OBL species 0 x 1 = 0
	2. 5 20% o	or total cover	: 13	FACW species 13 x 2 = 26
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 173 x 3 = 519
1 Carpinus caroliniana	30	<u>Y</u>	FAC	FACU species 0 x 4 = 0
2 Liquidambar styraciflua	20	Υ	FAC	UPL species
3 Ilex opaca	10	N	FAC	Column totals <u>186</u> (A) <u>545</u> (B)
4 Quercus michauxii	8	<u> </u>	FACW	Prevalence Index = B/A = 2.93
5 Carya alba	1	<u>N</u>		Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				X 3 - Prevalence index is ≤3.0*
	69	=Total Cove	r	4 - Morphogical adaptations* (provide
50% of total cover: 3 4	1.5 20% d	of total cover	13.8	supporting data in Remarks or on a
Herb Stratum (Plot size: 1m ²)			separate sheet)
1 None				Problematic hydrophytic vegetation*
2				(explain)
3				
4				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
5				Definitions of Four Vegetation Strata:
				Definitions of Four Vegetation Strata.
6				Tree Monday plants evaluating vines 2 in (7.6 cm)
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),
8				regardless of height.
9				
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall
12				, ,
		=Total Cove		Herb – All herbaceous (non-woody) plants,
50% of total cover:	20% (of total cover		regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius)			ft tall
1 Vitis rotundifolia	30	<u> </u>	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Smilax rotundifolia	20	<u> </u>	FAC	in height.
3 Bignonia capreolata	3	N	FAC	
4				
5				
6				Hydrophytic
	53	Total Cove	r	vegetation
50% of total cover: 26	5.5 20% (of total cover	10.6	present? Yes X No
				· — · —
Remarks: (Include photo numbers here or on a separ	ate sheet)			
terrande (mende prote nambers here of on a separ	511001)			

Sampling Point: Plot 49

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r confi	rm the absence of ind	icators.)		
Depth	Matrix		Redo	ox Feature	S					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 2	10YR 4/3	49	10YR 5/6	2	С	М	silty clay loam			
	10YR 5/2	49								
2 - 10	10YR 5/2	59	10YR 4/6	2	С	PL	silty clay loam			
	10YR 4/3	39								
10 - 12	10YR 6/1	98	10YR 6/8	2	С	М	silty clay loam			
10 .2	10111071		10111 0/0				only olay loans			
1 _{Tyme} , C = (Concentration D = D	anlation DM	1 - Dadwaad Matrix	MC - Mool	rad Cand	Crains	21 acation, DI – D	ara Lining M – Matrix		
		repietion, Riv	1 = Reduced Matrix, I					ore Lining, M = Matrix		
Hydric Soil Histisol			Polyvalue Below	/ Surface (S8)		1 cm Muck (A10) (I	-		
	pipedon (A2)	-	(LRR S, T, U) Thin Dark Surface	oo (SO) // E	реті	ι.	2 cm Muck (A10) (I	•		
	istic (A3)	-	Loamy Mucky M					-		
	en Sulfide (A4)	-	Loamy Gleyed N		(LIKIK O)		Reduced Vertic (F1 (outside MLRA 15			
	d Layers (A5)	-	X Depleted Matrix	` '						
	Bodies (A6) (LRR P	T II)	Redox Dark Sur	` '			Piedmont Floodplai (LRR P, S, T)	in Solis (F19)		
	ucky Mineral (A7) (L l	-	Depleted Dark S)	•	 ` ' ' ' '	comy Coile (F20)		
	resence (A8) (LRR L	-	Redox Depressi	-	,		Anomalous Bright Loamy Soils (F20) (MLRA 153B)			
	uck (A9) (LRR P. T)	•	Marl (F10) (LRR	` '		•	Red Parent Materia	al (TF12)		
	d Below Dark Surfac	e (A11)	Depleted Ochric	•	RA 151)	-	Very Shallow Dark			
	ark Surface (A12)	- (,	' Iron-Manganese		-	•	Other (explain in re			
	rairie Redox (A16)		(LRR O, P, T)	iviasses (i	12)	•		,		
(MLRA		•	Umbric Surface	(F13) (LRF	R P, T, U)					
	Mucky Mineral (S1)	-	Delta Ochric (F1							
(LRR O		-	Reduced Vertic	(F18) (MLF	RA 150A,	150E		³ Indicators of hydrophytic vegetation		
Sandy 0	Gleyed Matrix (S4)	-	Piedmont Flood	plain Soils	(F19) (M I	-RA 14	and weltand hydrology must be A) present, unless disturbed or problematic			
Sandy F	Redox (S5)	•	—— Anomalous Brigl							
Stripped	d Matrix (S6)		(MLRA 149A, 1			,				
Dark Su	ırface (S7) (LRR P, S	S, T, U)	<u> </u>							
D t i . ti	1 (°C - 1 1)		T							
	Layer (if observed)	:								
Type: Depth (inche	e).			Hydric soi	Inrocon	12	Yes X	No		
Deptil (ilicin				riyuric soi	i presem		163 <u>X</u>			
Remarks:										

Project/Site	Moro Creek Mit	igation Bank	Cit	ty/County:	Bunn	S	ampling Da	te:	2018/09/20
Applicant/Owner:		_					ampling Poi		Plot 50
Investigator(s):		Ewing, Joe Lo			n, Township, Ra	ange:		78S R14W	/ S24
Landform (hillslope	, terrace, etc.):		none	Local re	lief (concave, co	onvex, r	none):	r	none
Slope (%): 0	Lat:			Long:		D	atum:	W	GS84
Soil Map Unit Name	e	Wehadke	ee silt loam		NWI Class	sification	n:	PFC	1A
Are climatic/hydrolo	gic conditions of	the site typica	al for this time	e of the year? Ye	es X No		(If no, ex	plain in re	:marks)
Are vegetation	, soil	, or hydro	ologys	ignificantly distu	rbed? Ar	e "norm	nal circumst	ances" pr	esent?
Are vegetation	, soil	, or hydro	ologyn	aturally problem	atic?	Ye	es X	No	
					(If	needed	I, explain ar	ny answer	rs in Remarks.)
SUMMARY OF FI		h site map s	showing sar	mpling point lo	cations, trans	sects, i	mportant f	eatures,	etc.
Hydrophytic vegeta	· ·	Yes X	No						
Hydric soil present?		Yes X		Is the samp					
Wetland hydrology	present?	Yes X	No	within a we	tland?	Yes_	<u> </u>	No_	
HYDROLOGY									
Wetland Hydrolog	-				Sec	-	-		of two required)
Primary Indicators (minimum of one	is required; cl	neck all that a	apply)			ce Soil Cracl		
Surface Water (A1)	_		auna (B13)	·	Spars	ely Vegetate	ed Concav	e Surface (B8)
High Water Tab	le (A2)	_		osits (B15) (LRR		_	age Patterns		
Saturation (A3)		_	Hydrogen	Sulfide Odor (C1		Moss	Trim Lines (B16)	
Water Marks (B			Oxidized F	Rhizospheres on	Living	_	eason Wate		2)
Sediment Depos		_	Roots (C3	•			sh Burrows		
Drift Deposits (B	-	_	Presence	of Reduced Iron		_			Imagery (C9)
Algal Mat or Cru				n Reduction in T	illed X		orphic Posit		
Iron Deposits (B	•	_	Soils (C6)			_	w Aquitard (
	le on Aerial Image	ry (B7)		Surface (C7)		_	Neutral Test	` '	
Water-Stained L	.eaves (B9)		Other (Exp	olain in Remarks)		Sphag —	gnum moss ((D8) (LRR	Τ, U)
Field Observation	s:								
Surface water pres	ent? Yes	No	X Dept	th (inches)		Wetl	land hydro	logy pres	ent?
Water table presen	t? Yes	No	X Dept	th (inches)					
Saturation present?	? Yes	No	X Dept	th (inches)	`	Yes _	X	No _	
(includes capillary f	ringe)								
Describe recorded	data (stream gau	ge, monitorin	g well, aerial _l	photos, previous	s inspections), if	[·] availab	le:		
Remarks:									

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 50 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** None that are OBL, FACW, or FAC: 2 **Total Number of Dominant** Species Across all Strata:

Prevalence Index Worksheet Total % Cover of: **OBL** species **10** x 1 = 10 FACW species 128 256 x 2 =**FAC** species x3 =0 0 **FACU** species x 4 =**UPL** species x 5 = 0 138 (A) 266 (B) Column totals Prevalence Index = B/A = 1.93 **Hydrophytic Vegetation Indicators:**

X 2 - Dominance test is >50% X 3 - Prevalence index is ≤3.0* 4 - Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

1 - Rapid test for hydrophytic vegetation

(A)

(B)

Definitions of Four Vegetation Strata:

Percent of Dominant Species

that are OBL, FACW, or FAC: 100.00% (A/B)

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall

Woody Vine – All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present?

Yes X No

³ _					
1_					
5_					
3 _					
7_					
3					
			=	Total Cover	
	50% of	total cover:	20% of	f total cover:	
Sa	pling/Shrub Stratun (Plot size:	15-m radius)		_	
1_	None				
2 _					
3 _					
4 _					
5 _		_			
6_					
7_					
8					
				Total Cover	
	50% of	total cover:	20% o	total cover:	
Не	rb Stratum (Plot size:	1m ²)		•	
1	Bidens aristosa	·	100	Υ	FACW
2 _	Solidago gigantea	_	25	N	FACW
3 –	Persicaria hydropiperoides		10	N	OBL
- 4	Panicum verrucosum		3	N	FACW
5					
3					
7					
3					
9					
) _					
- 1					
_					
_		_	138 =	Total Cover	
	50% of	total cover: 69		f total cover:	
No		15-m radius			
1	None	,			
· 2	- ·- -	_			
- 3					
_ 4					
_					
5 <u> </u>					
5 -				Total Cover	
5 - 6 -	E00/ -5	total cover:		Total Cover	

US Amy Corps of Engineers

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the inc	dicator o	r confi	rm the absence of ind	icators.)		
Depth	Matrix		Redo	ox Features	3					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 3	10YR 3/2	98	10YR 3/6	2	С	М	silty clay loam			
3 - 12	10YR 3/2	98	10YR 3/6	2	С	М	clay loam			
¹ Type: C = 0	Concentration, D = D	epletion RM	= Reduced Matrix	MS = Mask	ed Sand	Grains	² l ocation: Pl = P	ore Lining, M = Matrix		
	Indicators:						Indicators for Probler			
Histisol			Polyvalue Below (LRR S, T, U)	V Surface (50)		1 cm Muck (A10) (_		
—	pipedon (A2)	-	Thin Dark Surface	ce (S9) (LF	RR S. T. U	J)	2 cm Muck (A10) (·		
_	istic (A3)	-	— Loamy Mucky M				Reduced Vertic (F			
_	en Sulfide (A4)	-	Loamy Gleyed N				(outside MLRA 15			
	d Layers (A5)	-	X Depleted Matrix			•	—— · Piedmont Floodpla			
Organic	Bodies (A6) (LRR P	, T, U)	Redox Dark Sur	face (F6)			(LRR P, S, T)			
5 cm M	ucky Mineral (A7) (L l	RR P, T, U)	Depleted Dark S	Surface (F7)	•	Anomalous Bright	Loamy Soils (F20)		
Muck P	resence (A8) (LRR L	J)	Redox Depressi	ons (F8)			(MLRA 153B)	, ,		
1 cm M	uck (A9) (LRR P. T)		Marl (F10) (LRR	R U)			Red Parent Materia	al (TF12)		
Deplete	d Below Dark Surfac	e (A11)	Depleted Ochric	(F11) (ML	RA 151)		Very Shallow Dark	Surface (TF12)		
Thick D	ark Surface (A12)		Iron-Manganese	Masses (F	emarks)					
Coast F	Prairie Redox (A16)	-	(LRR O, P, T)							
(MLRA	150A)	_	Umbric Surface	(F13) (LRF	R P, T, U))				
	Mucky Mineral (S1)	-	Delta Ochric (F1	7) (MLRA	151)		3Indicators of hydro	³ Indicators of hydrophytic vegetation and weltand hydrology must be		
LRR O	•	-	Reduced Vertic				and weltand hydrol			
— ·	Gleyed Matrix (S4)	-	Piedmont Flood	plain Soils	(F19) (MI	_RA 14	present, unless disturbed or			
	Redox (S5)		Anomalous Brig	-	•))	problematic			
─ ─ ''	d Matrix (S6)	· - · · ·	(MLRA 149A, 1	53C, 153D)					
Dark St	ırface (S7) (LRR P, \$	5, I, U)								
Restrictive	Layer (if observed)	:								
Туре:										
Depth (inch	es):			Hydric soi	l presen	t?	Yes X	No		
Remarks:										
Nemaiks.										

Project/Site	Moro Creek Miti	gation Bank		City/	County:	Sampling [Sampling Date: 2018/09/20		
Applicant/Owner:	Arkansas De	partment of Tr	ranspo	rtatio	on State:	AR	Sampling P	oint:	Plot 51
Investigator(s):	Kayti E	wing, Joe Led	vina		Section,	Township, R	ange:	T8S R14V	V S24
Landform (hillslope	, terrace, etc.):	no	one		Local relief	(concave, c	onvex, none):		none
Slope (%): 0	Lat:				Long:		Datum:	W	/GS84
Soil Map Unit Name	e	Wehadkee	silt loa	m		NWI Clas	sification:	PFC	D1A
Are climatic/hydrolo	ogic conditions of t	he site typical f	or this t	time c	of the year? Yes	X No	(If no, e	explain in re	emarks)
Are vegetation							re "normal circum	stances" p	resent?
Are vegetation	, soil	, or hydrolo	gy	nat	urally problemation		Yes X		
						•	f needed, explain	=	•
SUMMARY OF FI					oling point loca	tions, trans	sects, importan	t features.	, etc.
Hydrophytic vegeta	· ·	Yes	_ No						
Hydric soil present?		Yes	_ No	X	Is the sampled				
Wetland hydrology	present?	Yes	No_	X	within a wetlar	nd?	Yes	No	<u> </u>
Remarks: (Explain	alternative proced	ures here or in	a sepai	rate r	eport.)				
HYDROLOGY									
Wetland Hydrolog	y Indicators:					Sec	condary Indicators	(minimum	of two required)
Primary Indicators	(minimum of one is	s required; ched	ck all th	at ap	ply)		Surface Soil Cra	acks (B6)	
Surface Water (A1)		Aquatio	c Fau	na (B13)		— Sparsely Vegeta	ated Conca	/e Surface (B8)
High Water Tab	le (A2)		Marl D	epos	its (B15) (LRR U))	 Drainage Patter	ns (B10)	
Saturation (A3)			- Hydrog	gen Si	ulfide Odor (C1)		— Moss Trim Lines	s (B16)	
Water Marks (B	1)		Oxidiza	ed Rh	izospheres on Livi	na	 Dry-Season Wa	ter Table (C	;2)
Sediment Depos	sits (B2)		Roots		izospiioros on zivi	9	— Crayfish Burrow	rs (C8)	
Drift Deposits (E	33)		Preser	nce of	Reduced Iron (C4	.)	Saturation Visib	le on Aerial	Imagery (C9)
Algal Mat or Cru	ıst (B4)		Recent	t Iron	Reduction in Tilled	, >	Geomorphic Po	sition (D2)	
Iron Deposits (B	5)		Soils (rtoddollori iir Tillot		Shallow Aquitar	d (D3)	
Inundation Visib	ole on Aerial Imager	y (B7)	Thin M	luck S	Surface (C7)		FAC-Neutral Te	st (D5)	
Water-Stained L	eaves (B9)		Other ((Expla	in in Remarks)		Sphagnum mos	s (D8) (LRF	≀ T, U)
Field Observation	e.		_				<u> </u>		
Surface water pres		No	ΧD)enth	(inches)		Wetland hyd	rology pre	sent?
Water table presen	_	No			(inches)			ology plo	20111
Saturation present?	_	No		•	(inches)		Yes	No	X
(includes capillary f	_			. ор	(_	
Describe recorded		e monitoring v	vell aer	rial nh	notos previous in	spections) it	f available [.]		
	aata (on oant gaag	,=,				-p/,			
Remarks:									
			may	pass	FAC-neutral	test			
			•	•					

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 51 **Dominance Test Worksheet** Absolute Dominant Indicator Tree Stratum (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) Percent of Dominant Species that are OBL, FACW, or FAC: **50.00%** (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **11** x 1 = 20% of total cover: 50% of total cover: **FACW** species 55 x 2 =110 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species **12** x 3 = 36 1 Carya alba FACU species 8 x 4 =**FAC** Nyssa sylvatica UPL species x 5 = 0 Quercus nigra 2 Ν **FAC** Column totals **80** (A) **165** (B) Taxodium distichum 1 Ν OBL Prevalence Index = B/A = 2.06 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0* = Total Cover 4 - Morphogical adaptations* (provide 50% of total cover: 13 20% of total cover: 5.2 supporting data in Remarks or on a Herb Stratum (Plot size: separate sheet) Problematic hydrophytic vegetation* 1 Panicum verrucosum **FACW** (explain) 20 **FACW** 2 Panicum repens Persicaria hydropiperoides 10 3 Ν OBL *Indicators of hydric soil and wetland hydrology must be Carya alba present, unless disturbed or problematic 5 Tridens flavus FACU **Definitions of Four Vegetation Strata:** 6 7 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall = Total Cover Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: **14.4** (Plot size: 15-m radius) Woody Vine Stratum Rubus laudatus Woody Vine – All woody vines greater than 3.28 ft FAC in height. Smilax glauca 2 **FAC** Vitis cinerea Ν Bignonia capreolata 1 **FAC** 4 5 6 Hydrophytic 45 = Total Cover vegetation 50% of total cover: 22.5 20% of total cover: present? Yes No X Remarks: (Include photo numbers here or on a separate sheet) less than 80% of total cover is identified to species with indicator status. Panicum repens has only been recorded in one other Arkansas county.

Depth	Matrix	-		lox Feature		551111	m the absence of inc		,
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
0 - 6	10YR 3/2								
6 - 12	10YR 3/2	100					sandy clay		
¹ Type: C =	Concentration, D = [Depletion, RM	= Reduced Matrix,	MS = Mas	ked Sand	Grains.	² Location: PL = F	ore Lin	ing, M = Matrix
Hydric Soil	I Indicators:		Polyvalue Belov	w Surface (S8)		Indicators for Proble	matic F	lydric Soils ³ :
Histisol	(A1)		(LRR S, T, U)	w Garrage (00)		1 cm Muck (A10) (LRR O)
Histic E	pipedon (A2)		Thin Dark Surfa	ace (S9) (L l	RR S, T, 1	J)	2 cm Muck (A10) ((LRR S)
Black H	listic (A3)		Loamy Mucky N	Mineral (F1)	(LRR O)	Reduced Vertic (F	18)	
Hydrog	en Sulfide (A4)		Loamy Gleyed	Matrix (F2)		_	(outside MLRA 1	50Å, B)	
Stratifie	ed Layers (A5)		Depleted Matrix	k (F3)			Piedmont Floodpla	ain Soils	s (F19)
Organio	Bodies (A6) (LRR I	P, T, U)	Redox Dark Su	rface (F6)		_	(LRR P, S, T)		
	ucky Mineral (A7) (L	· -	Depleted Dark	Surface (F7	7)		Anomalous Bright Loamy Soils (F20)		
	resence (A8) (LRR	Redox Depress	` '		_	(MLRA 153B)	_ `		
1 cm Muck (A9) (LRR P. T) Marl (F10)				-		_	Red Parent Materi	•	•
	ed Below Dark Surfa	ce (A11)	Depleted Ochri	c (F11) (ML	.RA 151)	_	Very Shallow Dark		
Thick D	ark Surface (A12)		Iron-Manganes	e Masses (F12)	_	Other (explain in r	emarks)
	Prairie Redox (A16)	_	(LRR O, P, T)	(E40) (I B					
(MLRA	-	_	Umbric Surface)			
-	Mucky Mineral (S1)	_	Delta Ochric (F		-	4505	³ Indicators of hydr	ophytic	vegetation
(LRR 0	Gleyed Matrix (S4)	_	Reduced Vertic				and weltand hydro	loav mi	ist he
	Redox (S5)	_					(PA) present, unless dis	sturbed	or
	d Matrix (S6)		Anomalous Brig (MLRA 149A, 1))	problematic		
	urface (S7) (LRR P,	S. T. U)	(MERA 143A,	1000, 1000	,				
				1					
Restrictive	Layer (if observed):							
Type:									V
Depth (inch	es):			Hydric so	il presen	t?	Yes	No_	<u>X</u>
Remarks:									

Project/Site	Moro Creek Mit	igation Bank	City/	County:	Bunn	Samp	Sampling Date: 2018/09	
Applicant/Owner:	Arkansas D	Arkansas Department of Transportation			AR	Samp	ling Point:	Plot 52
Investigator(s):	Kayti E	Ewing, Joe Led	dvina	Section,	Township, Ra	ange:	T8S	R14W S24
Landform (hillslope	, terrace, etc.):	n	none	Local relie	ef (concave, co	onvex, none	e):	none
Slope (%): 0	Lat:			Long:		Datur	n:	WGS84
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Class	sification:		PFO1A
Are climatic/hydrolo	ogic conditions of	the site typical	for this time of	of the year? Yes	XNo	(I	f no, explair	n in remarks)
Are vegetation						e "normal c	ircumstance	es" present?
Are vegetation	, soil	, or hydrolo	ogynat	turally problemat		_		No
					•		-	nswers in Remarks.)
SUMMARY OF FI			nowing sam	pling point loc	ations, trans	sects, impo	ortant feati	ures, etc.
Hydrophytic vegeta	•	Yes X	No					
Hydric soil present?		Yes X	No	Is the sample				
Wetland hydrology	present?	Yes X	No	within a wetla	and?	Yes	<u>х </u>	No
Remarks: (Explain	alternative proced	dures here or in	n a separate r	eport.)				
LIVEROLOGY								
HYDROLOGY								
Wetland Hydrolog		is required; obs	ock all that an	nlu)	Sec	-	•	mum of two required)
Primary Indicators		is required, one	•		_	_	oil Cracks (B	
Surface Water (•		_Aquatic Fau		. –			oncave Surface (B8)
High Water Tab	le (A2)		_	its (B15) (LRR U	" —	_	Patterns (B1	
Saturation (A3)			_ Hydrogen S	ulfide Odor (C1)	_	_	n Lines (B16)	
Water Marks (B	•			izospheres on Li	ving <u> </u>	_	on Water Tal	
Sediment Depos			Roots (C3)		_	_	Burrows (C8)	
Drift Deposits (E	•		Presence of	Reduced Iron (C				Aerial Imagery (C9)
Algal Mat or Cru				Reduction in Tille	ed	_	nic Position (•
Iron Deposits (B	·		Soils (C6)	. (07)	_		quitard (D3)	
	le on Aerial Image	-ry (B7)	Thin Muck S		_		ral Test (D5)	
Water-Stained L	_eaves (B9)		Other (Expla	ain in Remarks)	=	Spriagnun —	n moss (D8)	(LRR 1, U)
Field Observation	s:							
Surface water pres		No	X Depth		_	Wetland	l hydrology	present?
Water table presen		No	X Depth	· ·	_			
Saturation present?		No	X Depth	(inches)	_ `	Yes X	No	
(includes capillary f								
Describe recorded	data (stream gau	ge, monitoring	well, aerial ph	notos, previous i	nspections), if	available:		
Remarks:				144			
			may pass	s FAC-neutra	test			

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 52 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover **Species** Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) Percent of Dominant Species that are OBL, FACW, or FAC: 66.67% (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **0** x 1 = 20% of total cover: 50% of total cover: **FACW** species 53 x 2 =106 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species x 3 = 111 1 Baccharis halimifolia FACU species **FAC** x 4 =8 Liquidambar styraciflua **FAC** UPL species x 5 = 0 Callicarpa americana **FACU** Column totals **92** (A) **225** (B) Prevalence Index = B/A = 2.45 4 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation X 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0* = Total Cover 36 4 - Morphogical adaptations* (provide 50% of total cover: 20% of total cover: 7.2 supporting data in Remarks or on a Herb Stratum (Plot size: separate sheet) Problematic hydrophytic vegetation* 1 Chasmanthium laxum **FACW** (explain) Rhexia mariana **FACW** 3 *Indicators 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) 7 or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall = Total Cover Herb - All herbaceous (non-woody) plants, 53 regardless of size, and woody plants less than 3.28 50% of total cover: 26.5 20% of total cover: 10.6 (Plot size: 15-m radius) Woody Vine Stratum Woody Vine – All woody vines greater than 3.28 ft Rubus laudatus FAC in height. Smilax rotundifolia **FAC** Gelsemium sempervirens 4 5 Hydrophytic 88 = Total Cover vegetation Yes X No 20% of total cover: **17.6** present? 50% of total cover: Remarks: (Include photo numbers here or on a separate sheet) less than 80% of cover is identified to species having indicator status

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the inc	dicator o	r confi	irm the absence of inc	licators.)		
Depth	Matrix		Rede	ox Features						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 3	10YR 4/3	98	10YR 5/6	2	С	М	silty clay loam			
3 - 10	10YR 5/2	80	10YR 5/8	20	С	PL	silty clay loam			
10 - 12	10YR 5/2	90	10YR 6/8	10	С	М	silty clay loam			
12 - 14	10YR 4/3	100								
1							2			
		epletion, RM	1 = Reduced Matrix,	MS = Mask	ed Sand			ore Lining, M = Matrix		
1 -	Indicators:		Polyvalue Below	v Surface (S	S8)		Indicators for Problem	-		
Histisol	•		(LRR S, T, U) Thin Dark Surfa	oo (SO) (LE	DC T I	IN .	1 cm Muck (A10) (2 cm Muck (A10) (•		
	pipedon (A2) istic (A3)	•	Loamy Mucky M					-		
	en Sulfide (A4)	•	Loamy Gleyed N		,)		Reduced Vertic (F (outside MLRA 15	•		
	d Layers (A5)	-	X Depleted Matrix				Piedmont Floodpla	•		
	Bodies (A6) (LRR F	P, T, U)	 Redox Dark Sur	face (F6)			(LRR P, S, T)	11 00113 (1 10)		
5 cm M	ucky Mineral (A7) (L	RR P, T, U)	Depleted Dark S	Surface (F7)	'	Anomalous Bright Loamy Soils (F20)			
Muck P	resence (A8) (LRR U	J)	X Redox Depressi	. ,			(MLRA 153B)	• , ,		
1 cm M	uck (A9) (LRR P. T)	•	Marl (F10) (LRR	•		•	Red Parent Materia	al (TF12)		
	d Below Dark Surfac	ce (A11)	Depleted Ochric	(F11) (ML	RA 151)		Very Shallow Dark	• •		
Thick D	ark Surface (A12)		Iron-Manganese	e Masses (F	F12)	•	Other (explain in re	emarks)		
	Prairie Redox (A16)	-	(LRR O, P, T)	/E12) /I DE	. D. T. III					
(MLRA	-		Umbric Surface Delta Ochric (F1)				
Sandy M	Mucky Mineral (S1)	•	Reduced Vertic		-	150F	³ Indicators of hydrophytic vegetation			
	Gleyed Matrix (S4)	•	Piedmont Flood				and weltand hydro 19A) present, unless dis			
	Redox (S5)	•	—— Anomalous Brig	•	. , ,		problematic	turbed or		
Stripped	d Matrix (S6)		(MLRA 149A, 1	-	•	,				
Dark Su	ırface (S7) (LRR P, S	S, T, U)								
Postrictivo	Layer (if observed)	\•								
Type:	Layer (II Observed)	,.								
Depth (inch	es):			Hydric soi	l presen	t?	Yes X	No		
			_							
Remarks:			dis	sturbed so	il					
			ui	starbea 30	"					

Project/Site	Moro Creek Mitigation Bank City/C		ity/County:	Bunn	Samplin	ng Date:	2018/10/02	
Applicant/Owner:	Arkansas Dep	partment of	Transporta	tion State:	AR	Samplin	g Point:	Plot 53
Investigator(s):	Kayti Ev	ving, Joe Led	dvina	Section	n, Township,	Range:	T8S R	R14W S24
Landform (hillslope,	terrace, etc.):		none	Local re	lief (concave,	convex, none):		none
Slope (%): 0	Lat:			Long:		Datum:		WGS84
Soil Map Unit Name	<u> </u>	Wehadkee	e silt loam	_	NWI Cla	assification:		PFO1A
Are climatic/hydrolo	gic conditions of th	ıe site typical	for this time	e of the year? Ye	s <u>X</u> No	(If n	o, explain	in remarks)
Are vegetation				significantly distu		Are "normal circ	umstance	s" present?
Are vegetation	, soil	, or hydrol	ogyr	naturally problem		Yes		lo
								swers in Remarks.)
SUMMARY OF FI				mpling point lo	cations, tra	nsects, import	ant featu	res, etc.
Hydrophytic vegeta	•	Yes X	No	_				
Hydric soil present?		Yes X	No	Is the samp				
Wetland hydrology	present?	Yes X	No	within a wet	tland?	Yes X	N	lo
HYDROLOGY	- • • •							
Wetland Hydrology	-				Se	-		num of two required)
Primary Indicators (minimum of one is	required; che	eck all that a	apply)	-	Surface Soil	-	•
Surface Water (A	•	_		auna (B13)	=			ncave Surface (B8)
High Water Tabl	e (A2)	_	_	oosits (B15) (LRR	_	Drainage Pa))
Saturation (A3)		_	Hydrogen	Sulfide Odor (C1) <u>-</u>	Moss Trim L	ines (B16)	
Water Marks (B1	•		Oxidized !	Rhizospheres on I	Living _	Dry-Season		le (C2)
Sediment Depos		_	Roots (C3		-	Crayfish Bur		
Drift Deposits (B	3)	_	Presence	of Reduced Iron (-			erial Imagery (C9)
Algal Mat or Cru			Recent In	on Reduction in Ti	lled -	X Geomorphic	-	02)
Iron Deposits (B		_	Soils (C6)	•	=	Shallow Aqu	` '	
	le on Aerial Imagery	(B7)		k Surface (C7)	-	X FAC-Neutral	` '	
Water-Stained L	eaves (B9)		Other (Ex	plain in Remarks)		Sphagnum n	noss (D8) (LRR T, U)
Field Observations								
Surface water prese	ent? Yes _	No	X Dep	oth (inches)	_	Wetland h	ydrology	present?
Water table present	t? Yes	No	X Dep	oth (inches)	_			
Saturation present?	Yes _	No	X Dep	oth (inches)	_	Yes X	No	
(includes capillary fi	ringe)			_				
Describe recorded of	data (stream gauge), monitoring	well, aerial	photos, previous	inspections),	if available:		
Remarks:								

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	
1	70 00101	Орослос	Otago	Number of Dominant Species that are OBL. FACW. or FAC: 6 (A)
•				that are OBL, FACW, or FAC:6 (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: 100.00% (A/B)
6				
7				Prevalence Index Worksheet
8	· 			Total % Cover of:
<u> </u>	· ——	Total Cove		OBL species 30 x 1 = 30
50% of total cover:		f total cover		· — — — —
		i total cover	<u> </u>	· — — —
Sapling/Shrub Stratun (Plot size: 15-m radius	•			FAC species <u>35</u> x 3 = <u>105</u>
1 Liquidambar styraciflua	10	<u> </u>	FAC	FACU species 1 x 4 = 4
2 Ilex opaca	2	N	FAC	UPL species
3 Carya myristiciformis	1	N	FACW	Column totals 134 (A) 275 (B)
4				Prevalence Index = $B/A = 2.05$
5	·			Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7	·			1
				X 2 - Dominance test is >50%
8				3 - Prevalence index is ≤3.0 and at least 80%
		Total Cove		X of total cover has indicator status*
	5.5 20% c	of total cover	2.6	4 - Morphogical adaptations* (provide
Herb Stratum (Plot size: 1m ²)			supporting data in Remarks or on a
1 Coleataenia rigidula	35	Υ	FACW	separate sheet)
2 Boehmeria cylindrica	25	Υ	FACW	Problematic hydrophytic vegetation*
3 Rhynchospora corniculata	20	Υ	OBL	(explain)
4 Persicaria hydropiperoides	5	N	OBL	*Indicators of hydric soil and wetland hydrology must be
5 Gratiola neglecta	5	N	OBL	present, unless disturbed or problematic
6 Arundinaria gigantea	2	N	FACW	Definitions of Four Vegetation Strata:
7 Pluchea camphorata	2	N	FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8 Bidens aristosa	2	N	FACW	or more in diameter at breast height (DBH),
9 Rhexia mariana	1		FACW	regardless of height.
10 Eupatorium capillifolium	1	N	FACU	Sapling/Shrub – Woody plants, excluding
11	· 			vines, less than 3 in. DBH and greater than or
12				equal to 3.28 ft (1 m) tall
12	98	Total Cove		Herb – All herbaceous (non-woody) plants,
E00/ of total cover:		f total cover		regardless of size, and woody plants less than 3.28
	49 20% c	i total cover	19.6	ft tall
Woody Vine Stratum (Plot size: 15-m radius	_)			
1 Vitis rotundifolia	15	<u> </u>	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Smilax rotundifolia	8	Y	FAC	in height.
3				
4				
5				
6				Hydrophytic
	23	Total Cove	r	vegetation
50% of total cover: 1		of total cover		present? Yes X No
<u> </u>				
Remarks: (Include photo numbers here or on a sepa	rate sheet)			
, ,	,			

Sampling Point: Plot 53

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r conf	irm the absence of ind	licators.)			
Depth	Matrix		Redo	ox Feature	S						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 2	10YR 5/2	98	10YR 5/6	2	С	PL	silty clay loam				
2 - 6	10YR 5/2	60	7.5YR 4/6	20	С	М	silty clay loam				
			7.5YR 5/8	20	С	М					
6 - 12	10YR 6/1	90	10YR 6/8	10	С	М	silty clay loam				
¹ Type: C = 0	Concentration, D = D	epletion, RM	I = Reduced Matrix, I	MS = Masł	ced Sand	Grains	s. ² Location: PL = P	ore Lining, M = Matrix			
1 -	Indicators:		Polyvalue Below	Surface (S8)		Indicators for Probler	•			
Histisol	•	-	(LRR S, T, U)				1 cm Muck (A10) (· ·			
	pipedon (A2)	-	Thin Dark Surface			-	2 cm Muck (A10) (LRR S)			
	istic (A3)	-	Loamy Mucky M		(LRR O)		Reduced Vertic (F	•			
	en Sulfide (A4)	-	Loamy Gleyed M	, ,			(outside MLRA 15	•			
	d Layers (A5)		X Depleted Matrix	` '			Piedmont Floodpla	in Soils (F19)			
	: Bodies (A6) (LRR P ucky Mineral (A7) (Ll	-	Redox Dark Surf Depleted Dark S		`		(LRR P, S, T)	0 " (500)			
	resence (A8) (LRR L		X Redox Depression	-	,			Anomalous Bright Loamy Soils (F20) (MLRA 153B)			
	uck (A9) (LRR P. T)	·,	Marl (F10) (LRR	, ,			Red Parent Materia	al (TF12)			
_	d Below Dark Surfac	e (A11)	Depleted Ochric	•	RA 151)		Very Shallow Dark	· ·			
	ark Surface (A12)	_	' Iron-Manganese		-		Other (explain in re	· ·			
	rairie Redox (A16)		(LRR O, P, T)	ividoses (i	12)			,			
(MLRA		•	Umbric Surface	(F13) (LRF	R P, T, U)						
Sandy N	Mucky Mineral (S1)	•	Delta Ochric (F1	7) (MLRA	151)		3				
(LRR [°] O	• , ,	-	Reduced Vertic (and weltand hydrol	³ Indicators of hydrophytic vegetation and weltand hydrology must be			
Sandy 0	Gleyed Matrix (S4)	-	Piedmont Flood	olain Soils	(F19) (M L	_RA 14	A) present, unless disturbed or problematic				
Sandy F	Redox (S5)		Anomalous Brigh	ht Loamy S	Soils (F20						
	d Matrix (S6)	-	(MLRA 149A, 15	53C, 153D)						
Dark Su	ırface (S7) (LRR P, S	S, T, U)									
Restrictive	Layer (if observed)	:									
Туре:	, ,										
Depth (inch	es):			Hydric soi	l present	t?	Yes X	No			
Remarks:			_								
Remarks.											

Project/Site	Moro Creek Mitiga	ation Bank	City/	County:	Bunn	Sampling D	Date: 2018/10/02
Applicant/Owner:	Arkansas Dep	artment of T	ransportatio	n State:	AR	Sampling Po	oint: Plot 54
Investigator(s):	Kayti Ew	ing, Joe Led	lvina	Section, T	ownship, Range	e:	T8S R14W S24
Landform (hillslope	, terrace, etc.):	n	one	Local relief	(concave, conve	ex, none):	none
Slope (%): 0	Lat:			Long:		Datum:	WGS84
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Classifica	ation:	PFO1A
Are climatic/hydrolo	ogic conditions of th	e site typical	for this time o	of the year? Yes	X No	(If no, e	explain in remarks)
Are vegetation	, soil	, or hydrolo	ogysigr	nificantly disturbed	d? Are "n	ormal circums	stances" present?
Are vegetation	, soil	, or hydrolo	ogynat	urally problematic		Yes X	
					•	-	any answers in Remarks.)
SUMMARY OF FI			owing samp	oling point locat	ions, transect	s, important	features, etc.
Hydrophytic vegeta	*	Yes X	No				
Hydric soil present?		Yes X	No	Is the sampled			
Wetland hydrology	present?	Yes X	No	within a wetlan	d? Ye	es X	No
	alternative procedu		·				
HYDROLOGY							
Wetland Hydrolog	· -				Seconda	ary Indicators	(minimum of two required)
Primary Indicators ((minimum of one is	required; che	ck all that app	ply)		urface Soil Cra	
Surface Water (•		_Aquatic Faur				ated Concave Surface (B8)
High Water Tab	le (A2)		_	its (B15) (LRR U)		rainage Patterr	
Saturation (A3)			_Hydrogen Su	ulfide Odor (C1)	M	oss Trim Lines	; (B16)
Water Marks (B				izospheres on Livin	9	ry-Season Wat	
Sediment Depos			Roots (C3)			rayfish Burrows	
Drift Deposits (B	•		Presence of	Reduced Iron (C4)			le on Aerial Imagery (C9)
Algal Mat or Cru	, ,			Reduction in Tilled		eomorphic Pos	
Iron Deposits (B	•		Soils (C6)			hallow Aquitard	
	le on Aerial Imagery	(B7)	Thin Muck S			AC-Neutral Tes	• •
Water-Stained L	.eaves (B9)		Other (Expla	in in Remarks)	Sr	ohagnum moss	s (D8) (LRR T, U)
Field Observation	s:						
Surface water pres	ent? Yes	No	X Depth	(inches)	V	Netland hydr	ology present?
Water table presen	t? Yes _	No	X Depth	· · · · · · · · · · · · · · · · · · ·			
Saturation present?	? Yes _	No	X Depth	(inches)	Yes	<u> X</u>	No
(includes capillary f	ringe)						
Describe recorded	data (stream gauge	, monitoring v	well, aerial ph	otos, previous ins	pections), if ava	ailable:	
Remarks:							

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 54 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **0** x 1 = 20% of total cover: **FACW** species 50% of total cover: 95 x 2 =190 Sapling/Shrub Stratun (Plot size: 15-m radius) **28** x 3 = FAC species FACU species 0 1 Ilex opaca **FAC** x 4 = **FAC** UPL species 2 Acer rubrum x 5 = 0 Pinus taeda 1 Ν **FAC** Column totals **123** (A) **274** (B) Nyssa sylvatica 1 Ν **FAC** Prevalence Index = B/A = 2.23 FAC **Hydrophytic Vegetation Indicators:** Quercus nigra 1 - Rapid test for hydrophytic vegetation **X** 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0 and at least 80% = Total Cover 16 X of total cover has indicator status* 50% of total cover: 20% of total cover: 3.2 4 - Morphogical adaptations* (provide Herb Stratum (Plot size: supporting data in Remarks or on a separate sheet) 1 Bidens aristosa **FACW** Problematic hydrophytic vegetation* 25 **FACW** 2 Boehmeria cylindrica (explain) 15 3 Panicum verrucosum **FACW** Senecio hieraciifolius **FAC** *Indicators of hydric soil and wetland hydrology must be Dichanthelium dichotomum **FAC** present, unless disturbed or problematic **Definitions of Four Vegetation Strata:** 6 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) 7 or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall Herb - All herbaceous (non-woody) plants, = Total Cover 99 regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: **19.8** (Plot size: 15-m radius) Woody Vine Stratum Vitis rotundifolia **FAC** Woody Vine – All woody vines greater than 3.28 ft in height. 2 3 4 5 Hydrophytic 8 = Total Cover vegetation Yes X No ____ 20% of total cover: 1.6 present? 50% of total cover: Remarks: (Include photo numbers here or on a separate sheet)

		e to the dept				or confi	rm the absence of ind	icators.)		
Depth (Inches)	Matrix Color (moist)	-	dox Feature %	Type ¹	Loc ²	Texture	Remarks			
, ,		%	Color (moist)		С			Remarks		
0 - 2	10YR 3/2	98	7.5YR 4/6	2		M	silty clay loam			
2 - 8	10YR 4/2	88	7.5YR 4/6	2	С	М	silty clay loam			
	10YR 5/1	10								
8 - 12	10YR 5/2	80	10YR 5/8	5	С	M	silty clay loam			
	10YR 5/3	10	7.5YR 4/6	5	С	M				
¹ Type: C =	Concentration, D = D	Depletion, RN	1 = Reduced Matrix	, MS = Mas	ked Sand	l Grains	. ² Location: PL = P	ore Lining, M = Matrix		
Hydric Soil	I Indicators:		Polyvalue Belo	w Surface	(S8)		Indicators for Probler	natic Hydric Soils³:		
Histisol	(A1)		(LRR S, T, U)		` '		1 cm Muck (A10) (LRR O)		
Histic E	pipedon (A2)		Thin Dark Surfa	ace (S9) (L	RR S, T, I	U)	2 cm Muck (A10) (LRR S)		
Black H	listic (A3)		Loamy Mucky I	Mineral (F1) (LRR 0))	Reduced Vertic (F	18)		
Hydrog	en Sulfide (A4)		Loamy Gleyed	Matrix (F2)	1		(outside MLRA 15	0A, B)		
Stratifie	ed Layers (A5)		X Depleted Matrix	x (F3)			Piedmont Floodpla	in Soils (F19)		
Organio	Bodies (A6) (LRR F	P, T, U)	Redox Dark Su	ırface (F6)			(LRR P, S, T)			
5 cm M	ucky Mineral (A7) (L	RR P, T, U)	Depleted Dark	Surface (F	7)		Anomalous Bright I	∟oamy Soils (F20)		
Muck P	resence (A8) (LRR I	J)	Redox Depress	sions (F8)			(MLRA 153B)			
1 cm M	R U)			Red Parent Materia	al (TF12)					
Deplete	ed Below Dark Surfac	ce (A11)	Depleted Ochri	ic (F11) (M I	LRA 151)		Very Shallow Dark	Surface (TF12)		
Thick D	ark Surface (A12)		Iron-Manganes	se Masses ((F12)		Other (explain in re	marks)		
Coast F	Prairie Redox (A16)		(LRR O, P, T)							
(MLRA	150A)		Umbric Surface	e (F13) (LR	R P, T, U)				
Sandy I	Mucky Mineral (S1)		Delta Ochric (F	17) (MLRA	151)		³ Indicators of hydrophytic vegetation and weltand hydrology must be			
LRR O), S)		Reduced Vertice							
Sandy	Gleyed Matrix (S4)		Piedmont Floor	dplain Soils	(F19) (M	LRA 14	9A) present, unless dis	turbed or		
Sandy I	Redox (S5)		Anomalous Bri				problematic			
	d Matrix (S6)		(MLRA 149A, <i>1</i>	153C, 153E))					
Dark Sı	urface (S7) (LRR P,	S, T, U)								
Postrictivo	Layer (if observed	١٠								
Type:	Layer (II Observed).								
-	es):			Hydric so	il nresen	t?	Yes X	No		
Bopan (mon				riyano oc	n procen	••		<u> </u>		
Remarks:										

Project/Site	Moro Creek Mi	tigation Bank		City	County: Bunn		Sampling Date:		2018/10/02
Applicant/Owner:	Arkansas D	Department of T	ransp	ortatio	on State:	AR	Sampling P	oint:	Plot 55
Investigator(s):	Kayti	Ewing, Joe Led	lvina		Section, T	ownship, R	ange:	T8S R14	W S24
Landform (hillslope,	terrace, etc.):	n	one		Local relief	(concave, c	convex, none):		none
Slope (%): 0	Lat:				Long:		Datum:	V	VGS84
Soil Map Unit Name	<u> </u>	Wehadkee	silt lo	am		NWI Clas	sification:	PF	O1A
Are climatic/hydrolo	gic conditions o	f the site typical	for this	time o	of the year? Yes _	X No	(If no, e	explain in r	remarks)
Are vegetation	, soil	, or hydrolo	ogy	sig	nificantly disturbed	d? A	re "normal circum	stances" p	resent?
Are vegetation	, soil	, or hydrolo	ogy	na	turally problematic	?	Yes X	No_	
						•	f needed, explain	•	,
SUMMARY OF FI		ch site map sh	owing	g sam	pling point locat	ions, trans	sects, importan	t features	s, etc.
Hydrophytic vegeta	· ·	Yes X	_ No						
Hydric soil present?		Yes	_ No	Х	Is the sampled	area			
Wetland hydrology	present?	Yes	No	Х	within a wetlan	d?	Yes	_ No_	X
HYDROLOGY									
Wetland Hydrolog	y Indicators:					Sec	condary Indicators	(minimum	of two required)
Primary Indicators (is required; che	ck all t	hat ap	ply)		Surface Soil Cra	•	
Surface Water (A		•		-	na (B13)				ve Surface (B8)
High Water Tabl	,		_ `		sits (B15) (LRR U)		Drainage Patter		(20)
Saturation (A3)	- (· ·=)		_		ulfide Odor (C1)		Moss Trim Lines		
Water Marks (B1	1)		_	_		_	Dry-Season Wa		C2)
Sediment Depos				zed Rr s (C3)	izospheres on Livir	ng <u> </u>	Crayfish Burrow		32)
Drift Deposits (B			_	. ,	Reduced Iron (C4)		Saturation Visib		I Imagery (C9)
Algal Mat or Cru			_		,	-	Geomorphic Po		
Iron Deposits (B			Soils		Reduction in Tilled		Shallow Aquitar		
	e on Aerial Imag	ery (B7)		` '	Surface (C7)		FAC-Neutral Te		
—— Water-Stained L	_		_		ain in Remarks)		— Sphagnum mos	` '	R T, U)
					,	_			. ,
Field Observations		N	v	Danth	(in aboa)		Watland bud		
Surface water prese Water table present		No No		-	(inches)		Wetland hyd	rology pre	esent?
Saturation present?		No			(inches)		Vaa	No	v
·		NO		Deptil	(inches)		Yes	No _	<u>X</u>
(includes capillary for Describe recorded of		ugo monitoring	م المد	orial pl	notos provious ins	nootiona) is	f available:		
	aata (stream gat	uge, monitoring v	well, at	епагрі	lotos, previous iris	spections), i	i avaliable.		
Remarks:									
			may	pas	s FAC-neutral t	est			

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	
(Flot size: 30-III radius)	70 COVE	Opecies	Otaus	Number of Dominant Species
1				that are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across all Strata: (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 60.00% (A/B)
6				
7				Prevalence Index Worksheet
8				Total % Cover of:
		Total Cove		OBL species 0 x 1 = 0
50% of total cover:		of total cover		FACW species 14 x 2 = 28
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 39 x 3 = 117
1 Hamamelis virginiana	25	Υ	FACU	FACU species 29 x 4 = 116
				· — —
2 Liquidambar styraciflua		<u>N</u>	FAC	UPL species 0 x 5 = 0
3 Symplocos tinctoria	5	N	FAC	Column totals <u>82</u> (A) <u>261</u> (B)
4 Ilex opaca	4	<u> </u>	FAC	Prevalence Index = B/A = 3.18
5 Callicarpa americana	4	N	FACU	Hydrophytic Vegetation Indicators:
6 Quercus pagoda	2	N	FACW	1 - Rapid test for hydrophytic vegetation
7 Carpinus caroliniana	2	N	FAC	X 2 - Dominance test is >50%
8 Quercus nigra	1	N	FAC	3 - Prevalence index is ≤3.0 and at least 80%
	47	Total Cove	<u> </u>	of total cover has indicator status*
50% of total cover: 2	3. 5 20% c	of total cover	9.4	4 - Morphogical adaptations* (provide
Herb Stratum (Plot size: 1m ²)			supporting data in Remarks or on a
1 Chasmanthium laxum	.′ 12	Υ	FACW	separate sheet)
-		<u>'</u>	FAC	Problematic hydrophytic vegetation*
2 Dichanthelium commutatum	8			(explain)
3 Dichanthelium dichotomum	5	<u> </u>	FAC	(схріант)
4				*Indicators of hydric soil and wetland hydrology must be
5				present, unless disturbed or problematic
6				Definitions of Four Vegetation Strata:
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8				or more in diameter at breast height (DBH),
9				regardless of height.
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12			-	equal to 3.28 ft (1 m) tall
	25	Total Cove		Herb – All herbaceous (non-woody) plants,
50% of total cover: 1		of total cover		regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius	2070 0	n total cover		ft tall
	. ⁾			
1 Rubus laudatus	75	<u>Y</u>		Woody Vine – All woody vines greater than 3.28 ft
2 Smilax rotundifolia	7	<u>N</u>	FAC	in height.
3 Vitis rotundifolia	2	N	FAC	
4				
5				
6				Hydrophytic
	84	Total Cove	r	vegetation
50% of total cover:	42 20% c	of total cover	: 16.8	present? Yes X No
				· · · · · · · · · · · · · · · · · · ·
Remarks: (Include photo numbers here or on a sepa	rate sheet)			
	,			

Sampling Point: Plot 55

Profile Des	cription: (Describe	to the depth	needed to docum	ent the in	dicator o	r confi	rm the absence of in	dicators.)		
Depth	Matrix		Rede	ox Feature:	S					
(Inches)	Color (moist)	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 6	10YR 3/2	100					silty clay loam			
6 - 12	10YR 3/2	100					loamy clay			
1	0		_ D - do d M - toire	MC - MI		0	21 ti D1 5	Dana Limina Man Makein		
	Concentration, D = D	epietion, Rivi						Pore Lining, M = Matrix		
_	Indicators:		Polyvalue Below	v Surface (S8)		Indicators for Proble	_		
Histisol	• •	_	(LRR S, T, U)	(CO) (I F	.D.C. T. I		1 cm Muck (A10)			
_	pipedon (A2)	_	Thin Dark Surfa				2 cm Muck (A10)			
Black H	Loamy Mucky M	, ,	(LKK U)		Reduced Vertic (F					
Hydroge	Loamy Gleyed N			-	(outside MLRA 1					
Stratifie	Depleted Matrix	` '			Piedmont Floodpla	ain Soils (F19)				
	: Bodies (A6) (LRR P ucky Mineral (A7) (L l	_	Redox Dark Sur		`	-	(LRR P, S, T)			
_	Depleted Dark S	•)		Anomalous Bright Loamy Soils (F20) (MLRA 153B)					
	resence (A8) (LRR L	-	Redox Depressi Marl (F10) (LRR			-		ial (TE12)		
_	uck (A9) (LRR P. T)	<u> </u>		•	DA 151\	-	Red Parent Mater			
	d Below Dark Surfac	e (ATT) _	Depleted Ochric		-	-	Very Shallow Dark	·		
	ark Surface (A12)		Iron-Manganese	e Masses (F	=12)	-	Other (explain in r	emarks)		
	Prairie Redox (A16)	_	(LRR O, P, T)	/E12) // DE	. D. T. IIV					
(MLRA	-	_	Umbric Surface			,				
	Mucky Mineral (S1)	_	Delta Ochric (F1		-	4505	³ Indicators of hydrophytic vegetation and weltand hydrology must be 9A) present, unless disturbed or problematic			
(LRR O	Gleyed Matrix (S4)	_	Reduced Vertic							
— ·	Redox (S5)	_								
	d Matrix (S6)		Anomalous Brig (MLRA 149A, 1	-))				
	urface (S7) (LRR P, \$	_ . T II\	(WLKA 149A, 1	33C, 133D	,					
Daik St	unace (37) (LKK F,	3, 1, 0)								
Restrictive	Layer (if observed)	:								
Type:										
Depth (inch	es):			Hydric soi	l presen	t?	Yes	No X		
Remarks:										
Remarks.										

Project/Site	Moro Creek	Mitigation Ba	nk	City/Co	ounty:	Bunn	Sa	mpling Date	e: 2018/10/02		
Applicant/Owner:	Arkansas	Department	of Trans	portation	State:	AR	Sa	mpling Poin	t: Plot 56		
Investigator(s):	Kay	ti Ewing, Joe	Ledvina	ı	Section, To	ownship, Ra	wnship, Range: T8S R14W S24				
Landform (hillslope	, terrace, etc.)		none		Local relief (concave, co	nvex, n	one):	none		
Slope (%): 0	Lat:				Long:		Da	ıtum:	WGS84		
Soil Map Unit Name	e	Wehad	lkee silt l	loam		NWI Class	ification	·	PFO1A		
Are climatic/hydrolo	ogic conditions	of the site typ	ical for th	is time of	the year? Yes _	X No		(If no, exp	lain in remarks)		
Are vegetation	, soil	, or hy	drology	signif	ficantly disturbed	l? Are	e "norma	al circumsta	nces" present?		
Are vegetation	, soil	, or hy	drology	natur	ally problematic	?	Yes	s <u>X</u>	No		
						(If	needed,	explain any	y answers in Remarks.)		
SUMMARY OF FI	NDINGS - At	tach site ma	p showir	ng sampli	ing point locati	ions, trans	ects, in	nportant fe	atures, etc.		
Hydrophytic vegeta	tion present?	Yes	X No	٥							
Hydric soil present?	?	Yes	X No	0	ls the sampled	area					
Wetland hydrology	present?	Yes	X No	°	within a wetland	d?	Yes	Х	No		
HYDROLOGY											
Wetland Hydrolog	=					Seco	ondary Ir	ndicators (m	ninimum of two required)		
Primary Indicators ((minimum of o	ne is required	; check al	I that apply	y)		_	e Soil Cracks	,		
Surface Water (A1)			ıatic Fauna	, ,		Sparse	ly Vegetated	d Concave Surface (B8)		
High Water Tab	le (A2)		Ma	rl Deposits	(B15) (LRR U)		_ Draina	ge Patterns ((B10)		
Saturation (A3)			Нус	drogen Sulf	ide Odor (C1)		_Moss T	rim Lines (B	16)		
Water Marks (B	1)		Oxi	dized Rhizo	ospheres on Livin	g <u> </u>	_Dry-Se	ason Water	Table (C2)		
Sediment Depos				ots (C3)			_	h Burrows (0	•		
X Drift Deposits (B	•		Pre	sence of R	educed Iron (C4)		_		on Aerial Imagery (C9)		
Algal Mat or Cru					eduction in Tilled	<u> </u>	_	orphic Position			
Iron Deposits (B	-	(5-1)		ls (C6)			_	v Aquitard (E	·		
Inundation Visib		agery (B7)		n Muck Sur	` ,		_	eutral Test (l	,		
X Water-Stained L	eaves (B9)		Oth	er (Explain	in Remarks)		Spnagi	num moss (L	08) (LRR T, U)		
Field Observation	s:										
Surface water pres	ent? Ye	s	No <u>X</u>	Depth (ir	nches)		Wetla	and hydrolo	ogy present?		
Water table presen	t? Ye	s	No <u>X</u>	_Depth (ir	nches)						
Saturation present?	? Ye	s	No <u>X</u>	_Depth (ir	nches)	Y	'es	X	No		
(includes capillary f	ringe)										
Describe recorded	data (stream g	auge, monito	ring well,	aerial phot	tos, previous insp	pections), if	availabl	e:			
Remarks:											

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	
1 Liquidambar styraciflua	40	Y	FAC	Number of Dominant Species that are OBL, FACW, or FAC: 6 (A)
2 Acer rubrum	20	<u>'</u>	FAC	
-	15	<u> </u>	FAC	Total Number of Dominant Species Across all Strata: 6 (B)
3 Carpinus caroliniana	15		FAC	
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC:(A/B)
6				Duranda na a Inday Wantaha at
				Prevalence Index Worksheet
8				Total % Cover of:
500/ - 51-1-1		Total Cove		OBL species
	7.5 20% o	f total cover	15	FACW species 0 x 2 = 0
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 144 x 3 = 432
1 Liquidambar styraciflua	17	<u> </u>	FAC	FACU species <u>0</u> x 4 = <u>0</u>
2 Carpinus caroliniana	12	<u> </u>	FAC	UPL species x 5 =0
3 Ilex opaca	10	<u>N</u>	FAC	Column totals <u>144</u> (A) <u>432</u> (B)
4 Acer rubrum	10	<u>N</u>	FAC	Prevalence Index = B/A = 3.00
5 Quercus nigra	2	N	FAC	Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				3 - Prevalence index is ≤3.0 and at least 80%
	51 =	Total Cove	r	X of total cover has indicator status*
50% of total cover: 25	5. 5 20% o	f total cover	10.2	4 - Morphogical adaptations* (provide
Herb Stratum (Plot size: 1m ²)			supporting data in Remarks or on a
1 Carex sp.	1	N		separate sheet)
2				Problematic hydrophytic vegetation*
3				(explain)
4				
·				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6				Definitions of Four Vegetation Strata:
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8				or more in diameter at breast height (DBH),
9				regardless of height.
				Sapling/Shrub – Woody plants, excluding
10				vines, less than 3 in. DBH and greater than or
11				equal to 3.28 ft (1 m) tall
12				` '
		Total Cove		Herb – All herbaceous (non-woody) plants,
	. 5 20% o	f total cover	0.2	regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius)			ft tall
1 Vitis rotundifolia	15	Υ	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Smilax rotundifolia	3	N	FAC	in height.
3				
4				
5				
5 6				Hydrophytic
	18 =	Total Cove		Hydrophytic vegetation
6		Total Cove		vegetation
6				vegetation
6	9 20% o			vegetation
6 50% of total cover:	9 20% o			vegetation
6 50% of total cover:	9 20% o			vegetation
6 50% of total cover:	9 20% o			vegetation

Sampling Point: Plot 56

•	Matrix		Red	dox Feature	s			
Inches)	oth Matrix ches) Color (moist) %		Color (moist)	%	% Type ¹ I		Texture	Remarks
0 - 6	10YR 3/2	98	7.5YR 4/6			М	silty clay loam	
6 - 12	10YR 3/2	96	10YR 4/6	2	С	M	sandy loam	
	10YR 6/1	2						
Гvpe: С = (Concentration, D = [Depletion, RM	= Reduced Matrix	. MS = Mas	⊥ ked Sand	Grains.	² Location: PL =	Pore Lining, M = Matri
•	Indicators:	'						ematic Hydric Soils ³ :
Histisol			Polyvalue Belo (LRR S, T, U)	w Surface (30)		1 cm Muck (A10)	-
_	pipedon (A2)	_	Thin Dark Surfa	ace (S9) (L	RR S, T, I	J) _	2 cm Muck (A10)	
_	istic (A3)	_	— Loamy Mucky I	. , ,		_	Reduced Vertic (
	en Sulfide (A4)	_	Loamy Gleyed	=			(outside MLRA	,
— ' '	d Layers (A5)	_	X Depleted Matrix	, ,		_	— Piedmont Floodp	•
_	Bodies (A6) (LRR I	_	— · Redox Dark Su	` '			(LRR P, S, T)	Maii Oolis (i 19)
_	ucky Mineral (A7) (L	_	— Depleted Dark	Surface (F	7)	-		nt Loamy Soils (F20)
Muck P	resence (A8) (LRR	Redox Depress	sions (F8)			(MLRA 153B)	1. 20dilly 00110 (1 20)	
1 cm Muck (A9) (LRR P. T) Marl (F10) (L Depleted Below Dark Surface (A11) Depleted Oc				R U)		_	Red Parent Mate	rial (TF12)
				ic (F11) (MI	RA 151)	_	— Very Shallow Da	Very Shallow Dark Surface (TF12)
Thick Dark Surface (A12) Iron-Mangan				se Masses (F12)	_	Other (explain in	remarks)
— Coast F	Prairie Redox (A16)		(LRR O, P, T)	(_		
(MLRA	• •	_	Umbric Surface	e (F13) (LR	R P, T, U))		
— Sandv N	Mucky Mineral (S1)	_	Delta Ochric (F	17) (MLRA	151)		3	
(LRR [°] O		_	Reduced Vertic	c (F18) (ML	RA 150A	150E	Indicators of hyd and weltand hydi	drophytic vegetation
Sandy (Gleyed Matrix (S4)	_	Piedmont Floor	dplain Soils	(F19) (M	LRA 149	9A) present, unless c	listurbed or
Sandy F	Redox (S5)		Anomalous Bri				problematic	
Strinner	d Matrix (S6)	_	(MLRA 149A,			,		
	ırface (S7) (LRR P,	S, T, U)						
Dark Su	Layor (if observed	١.						
Dark Su	Layer (if observed):						
Dark Su estrictive ype:				Hydric so	il presen	t?	Yes X	No
Dark Su	Layer (if observed			Hydric so	il presen	t?	Yes X	No
Dark Su Restrictive Type:				Hydric so	il presen	t?	Yes <u>X</u>	No
Dark Surestrictive Type: Tepth (inches				Hydric so	il presen	t?	Yes X	No
Dark Suestrictive ype: epth (inche				Hydric so	il presen	t? 	Yes <u>X</u>	No
Dark Suestrictive ype: epth (inche				Hydric so	il presen	t?	Yes <u>X</u>	No
Dark Suestrictive ype: epth (inche				Hydric so	il presen	t?	Yes X	No
Dark Su estrictive ype: epth (inche				Hydric so	il presen	t?	Yes X	No
Dark Su Restrictive Type:				Hydric so	il presen	t? 	Yes <u>X</u>	No
Dark Su				Hydric so	il presen	1?	Yes <u>X</u>	No
Dark Su Restrictive Type:				Hydric so	il presen	1?	Yes <u>X</u>	No
Dark Su Restrictive Type:				Hydric so	il presen	t?	Yes X	No
Dark Su estrictive ype: epth (inche				Hydric so	il presen	1?	Yes X	No

Project/Site	Moro Creek Mitig	ation Bank	City/	County:	Bunn	Samplin	g Date:	2018/10/02
Applicant/Owner:	Arkansas Dep	partment of T	ransportatio	on State:	AR	Sampling	g Point:	Plot 57
Investigator(s):	Kayti Ev	ving, Joe Led	lvina	Section,	Township, Ra	nge:	T8S R	R14W S24
Landform (hillslope	, terrace, etc.):	n	one	Local reliet	f (concave, co	nvex, none):		none
Slope (%): 0	Lat:			Long:		Datum:		WGS84
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Class	ification:		PFO1A
Are climatic/hydrolo	ogic conditions of th	ne site typical	for this time o	of the year? Yes	XNo	(If n	o, explain	in remarks)
Are vegetation	, soil	, or hydrolo	ogysig	nificantly disturbe	ed? Are	e "normal circ	umstance	s" present?
Are vegetation	, soil	, or hydrolo	ogynat	urally problemati		YesX		lo
					-	-	-	swers in Remarks.)
SUMMARY OF FI			owing sam	pling point loca	tions, trans	ects, import	ant featu	res, etc.
Hydrophytic vegeta	•	Yes X	No					
Hydric soil present?		Yes X	No	Is the sample				
Wetland hydrology	present?	Yes X	No	within a wetla	nd?	Yes X	N	lo
Remarks: (Explain	alternative procedu	res here or in	a separate re	eport.)				
HYDROLOGY								
Wetland Hydrolog	y Indicators:				Seco	ndary Indicat	ors (minin	num of two required)
Primary Indicators	(minimum of one is	required; che	ck all that ap	ply)		Surface Soil	Cracks (B6	მ)
Surface Water (A1)		_Aquatic Fau	na (B13)		Sparsely Veg	jetated Co	ncave Surface (B8)
High Water Tab	le (A2)		Marl Depos	its (B15) (LRR U)	_ Drainage Pat	iterns (B10))
Saturation (A3)			Hydrogen Su	ulfide Odor (C1)		Moss Trim Li	nes (B16)	
Water Marks (B	1)	' <u></u>	Oxidized Rh	izospheres on Liv	ina —	Dry-Season \	Water Tab	le (C2)
Sediment Depos	sits (B2)		Roots (C3)	izospiioros sir ziv	g	Crayfish Burr	ows (C8)	
X Drift Deposits (E	33)		Presence of	Reduced Iron (C4	1)	Saturation Vi	sible on A	erial Imagery (C9)
Algal Mat or Cru	ıst (B4)	' <u></u>	Recent Iron	Reduction in Tilled	X	Geomorphic	Position (E	02)
Iron Deposits (B	55)		Soils (C6)			Shallow Aqui	tard (D3)	
Inundation Visib	le on Aerial Imagery	(B7)	Thin Muck S	Surface (C7)	X	FAC-Neutral	Test (D5)	
X Water-Stained L	eaves (B9)		Other (Expla	in in Remarks)		Sphagnum m	noss (D8) (LRR T, U)
Field Observation								
Surface water pres		No	X Depth	(inches)		Wetland h	vdrology	present?
Water table presen	_	No	X Depth	· · · · · · · · · · · · · · · · · · ·	•		,	
Saturation present?		No	X Depth	· · · · · · · · · · · · · · · · · · ·	· Y	es X	No	
(includes capillary f				`	'			
Describe recorded		e, monitoring \	well, aerial ph	notos, previous in	spections), if	available:		
	, ,	-	•		•			
Remarks:								
	·	some rais	ed areas n	earby have m	ore upland	soil		
					•			

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	
1 Liquidambar styraciflua	45	•	FAC	Number of Dominant Species that are OBL. FACW. or FAC: 6 (A)
		<u>Y</u>		that are OBL, FACW, or FAC:6 (A)
2 Quercus phellos	20	<u>Y</u>	FACW	Total Number of Dominant
3 Quercus nigra	15	<u>N</u>	FAC	Species Across all Strata:6 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 100.00% (A/B)
6				
7				Prevalence Index Worksheet
8				Total % Cover of:
	80	Total Cove	r	OBL species 0 x 1 = 0
50% of total cover: 40	20% (of total cover	: 16	FACW species 20 x 2 = 40
Sapling/Shrub Stratun (Plot size: 15-m radius)				FAC species 110 x 3 = 330
1 Carpinus caroliniana	20	Υ	FAC	FACU species 0 x 4 = 0
2 Liquidambar styraciflua	15		FAC	UPL species 0 x 5 = 0
3 Vaccinium sp.	6			Column totals 130 (A) 370 (B)
4 Symplocos tinctoria	1		FAC	Prevalence Index = B/A = 2.85
			FAC	
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				3 - Prevalence index is ≤3.0 and at least 80%
		Total Cove		X of total cover has indicator status*
50% of total cover: 21	20% (of total cover	8.4	4 - Morphogical adaptations* (provide
Herb Stratum (Plot size: 1m ²)				supporting data in Remarks or on a
1 Carpinus caroliniana	1	N	FAC	separate sheet)
2				Problematic hydrophytic vegetation*
3				(explain)
4				
5				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
6				Definitions of Four Vegetation Strata:
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
				or more in diameter at breast height (DBH),
8				regardless of height.
9				
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall
12				equal to 3.20 it (1 iii) tali
		Total Cove		Herb – All herbaceous (non-woody) plants,
50% of total cover: 0.	5 20% d	of total cover	0.2	regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius)				ft tall
1 Vitis rotundifolia	6	Υ	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Smilax rotundifolia	3	<u> Y</u>	FAC	in height.
3 Berchemia scandens	2	N	FAC	
4 Smilax glauca	2	N	FAC	
5				
6				
<u> </u>	13	Total Cove		Hydrophytic
500/ of total occurry 60				vegetation present? Yes X No
50% of total cover: 6.	20% (of total cover	2.6	present?
D	414\			
Remarks: (Include photo numbers here or on a separa	ate sheet)			

Sampling Point: Plot 57

Profile Des	cription: (Describe	to the dept				r confi	rm the abse	nce of inc	dicators.)
Depth	Matrix		_	lox Feature			_		
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text		Remarks
0 - 1	10YR 3/2	39	10YR 5/6	2	С	М	silty cla	y loam	
	10YR 5/1	59							
1 - 6	10YR 4/2	98	10YR 5/8	2	С	M	silty cla	y loam	
6 - 12	10YR 5/2	80	10YR 5/8	2	С	М	sandy	loam	
¹ Type: C = 0	Concentration, D = D	Depletion, RM	I = Reduced Matrix,	MS = Mas	ked Sand	Grains	s. ² Locati	on: PL = F	Pore Lining, M = Matrix
Hydric Soil	Indicators:		Polyvalue Belov	w Surface (S8)		Indicators f	or Proble	matic Hydric Soils ³ :
Histisol	(A1)		(LRR S, T, U)	(,		1 cm Mu	ıck (A10) ((LRR O)
Histic E	pipedon (A2)	•	Thin Dark Surfa	ace (S9) (L l	RR S, T, I	J)	2 cm Mu	ıck (A10) ((LRR S)
Black H	listic (A3)	•	Loamy Mucky N	Mineral (F1)	(LRR 0)		Reduce	d Vertic (F	18)
Hydroge	en Sulfide (A4)	•	Loamy Gleyed	Matrix (F2)				MLRA 1	
Stratifie	d Layers (A5)	•	X Depleted Matrix	k (F3)		•	—— Piedmoi	nt Floodpla	ain Soils (F19)
Organic	Bodies (A6) (LRR F	P, T, U)	Redox Dark Su	rface (F6)			(LRR P,	•	(-)
5 cm M	ucky Mineral (A7) (L	RR P, T, U)	Depleted Dark	Surface (F7	7)	•	Anomalo	ous Bright	Loamy Soils (F20)
Muck P	Redox Depress	sions (F8)				_(MLRA 153B)			
1 cm M	Marl (F10) (LRI	R U)	al (TF12)						
Deplete	d Below Dark Surfac	ce (A11)	Depleted Ochri	c (F11) (ML	RA 151)	•	Very Sh	allow Dark	Surface (TF12)
Thick D	ark Surface (A12)	-	 Iron-Manganes	e Masses (F12)	•	Other (e	xplain in r	emarks)
Coast F	Prairie Redox (A16)	_	(LRR O, P, T)	,	,	•			
(MLRA		-	Umbric Surface	(F13) (LR	R P, T, U))			
Sandy I	Mucky Mineral (S1)	-	Delta Ochric (F	17) (MLRA	151)		3		
(LRR [°] O		-	Reduced Vertic	(F18) (ML	RA 150A	, 150E			ophytic vegetation logy must be
Sandy (Gleyed Matrix (S4)	-	Piedmont Flood	dplain Soils	(F19) (M	LRA 14	(9A) present,	unless dis	sturbed or
Sandy F	Redox (S5)		Anomalous Brig				problem		
Stripped	d Matrix (S6)	-	(MLRA 149A, 1	153C, 153D))				
Dark Sເ	urface (S7) (LRR P,	S, T, U)							
Postrictivo	Layer (if observed	١٠		1					
Type:	Layer (II Observed)	<i>)</i> ·							
	es):			Hydric so	il nresen	t?	Yes X	7	No
Bopan (mon				i iyano oo	ıı proceii	••	100_7	<u> </u>	
Remarks:									
		S	ome raised areas	nearby hav	ve more	upland	soil		

Project/Site	Moro Creek Mitiga	ation Bank	City/	County:	Bunn	Sampling D	Date: 2018/10/02
Applicant/Owner:	Arkansas Dep	artment of T	ransportatio	n State:	AR	Sampling P	oint: Plot 58
Investigator(s):	Kayti Ew	ing, Joe Led	vina	Section, T	ownship, Range	e:	T8S R14W S24
Landform (hillslope	, terrace, etc.):	n	one	Local relief	(concave, conve	ex, none):	none
Slope (%): 0	Lat:			Long:		Datum:	WGS84
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Classifica	ation:	PFO1A
Are climatic/hydrolo	ogic conditions of the	e site typical	for this time o	of the year? Yes _	X No	(If no, e	explain in remarks)
Are vegetation	, soil	, or hydrolo	ogysigr	nificantly disturbed	d? Are "n	ormal circums	stances" present?
Are vegetation	, soil	, or hydrolo	ogynati	urally problematic		Yes X	
					•	· ·	any answers in Remarks.)
	NDINGS - Attach		owing samp	oling point locat	ions, transect	s, important	features, etc.
Hydrophytic vegeta	-	Yes X	No				
Hydric soil present?		Yes X	_ No	Is the sampled			
Wetland hydrology	present?	Yes X	No	within a wetlan	d? Ye	es X	No
			·				
HYDROLOGY							
Wetland Hydrolog	_				Second	ary Indicators	(minimum of two required)
Primary Indicators ((minimum of one is	required; che	ck all that app	ply)	Sı	urface Soil Cra	icks (B6)
Surface Water (A1)		_Aquatic Faur			parsely Vegeta	ated Concave Surface (B8)
High Water Tabl	le (A2)		_Marl Deposi	its (B15) (LRR U)	Di	rainage Patterr	ns (B10)
Saturation (A3)			_Hydrogen Su	ulfide Odor (C1)	M	oss Trim Lines	s (B16)
Water Marks (B	1)		Oxidized Rhi	izospheres on Livir	ngDi	ry-Season Wat	ter Table (C2)
Sediment Depos			Roots (C3)			rayfish Burrow	s (C8)
X Drift Deposits (B	33)		Presence of	Reduced Iron (C4)			le on Aerial Imagery (C9)
Algal Mat or Cru	ıst (B4)		Recent Iron I	Reduction in Tilled		eomorphic Pos	
Iron Deposits (B	•		Soils (C6)			hallow Aquitaro	
	le on Aerial Imagery	(B7)	Thin Muck S	urface (C7)		AC-Neutral Tes	, ,
X Water-Stained L	.eaves (B9)	_	Other (Expla	in in Remarks)	S _I	ohagnum moss	s (D8) (LRR T, U)
Field Observations	s:						
Surface water prese	ent? Yes	No	X Depth	(inches)	١	Netland hydr	rology present?
Water table present	t? Yes	No	X Depth	(inches)			
Saturation present?	? Yes	No	X Depth	(inches)	Yes	X	No
(includes capillary f	ringe)						
Describe recorded	data (stream gauge	, monitoring v	well, aerial ph	otos, previous ins	pections), if ava	ailable:	
Remarks:							
T CONTRACTOR							

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	
· · · · · · · · · · · · · · · · · · ·	15	-	FACW	Number of Dominant Species that are OBL. FACW. or FAC: 5 (A)
1 Quercus pagoda		<u>Y</u>		that are OBL, FACW, or FAC: (A)
2 Quercus nigra	8	<u>Y</u>	FAC	Total Number of Dominant
3 Quercus michauxii	5	N	FACW	Species Across all Strata: (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC:(A/B)
6				
7				Prevalence Index Worksheet
8				Total % Cover of:
	28	Total Cove	r	OBL species 0 x 1 = 0
50% of total cover: 1		of total cover		FACW species 23 x 2 = 46
Sapling/Shrub Stratun (Plot size: 15-m radius		,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		FAC species 59 x 3 = 177
	•	V	E40	
1 Ilex opaca	12	<u>Y</u>	FAC	FACU species 0 x 4 = 0
2 Carpinus caroliniana	10	<u> </u>	FAC	UPL species x 5 =0
3 Quercus michauxii	2	<u>N</u>	FACW	Column totals 82 (A) 223 (B)
4 Carya myristiciformis	1	N	FACW	Prevalence Index = B/A = 2.72
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				3 - Prevalence index is ≤3.0 and at least 80%
	25	Total Cove	r	X of total cover has indicator status*
50% of total cover: 12		of total cover		
<u> </u>	2070 0	n total cover		4 - Morphogical adaptations* (provide
)			supporting data in Remarks or on a
1 None				separate sheet)
2				Problematic hydrophytic vegetation*
3				(explain)
4				
5				*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
				Definitions of Four Vegetation Strata:
6				
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8				or more in diameter at breast height (DBH),
9				regardless of height.
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12				equal to 3.28 ft (1 m) tall
·-		Total Cove	r	Herb – All herbaceous (non-woody) plants,
50% of total cover:		of total cover		regardless of size, and woody plants less than 3.28
		, ioiai covel		ft tall
Woody Vine Stratum (Plot size: 15-m radius)	.,		
1 Vitis rotundifolia	25	<u>Y</u>	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Berchemia scandens	2	N	FAC	in height.
3 Smilax glauca	2	N	FAC	
4				
5				
6				He almon he at a
	29	Total Cove	.r	Hydrophytic
F00/ - \$				vegetation
50% of total cover:14	1.5 20% c	of total cover	5.8	present? Yes X No No
Remarks: (Include photo numbers here or on a separ	ate sheet)			

Sampling Point: Plot 58

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r confi	irm the absence of ind	icators.)			
Depth	Matrix		Redo	x Feature	s						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 1	10YR 5/3	100					silty clay loam				
1 - 6	10YR 4/2	49	7.5YR 4/6	2	С	М	silty clay loam				
	10YR 5/1	49	7.5YR 3/6	2	С	М					
6 - 12	10YR 4/2	49	7.5YR 3/6	2	С	М	sandy loam				
	10YR 5/2	49					-				
¹ Type: C = 0	Concentration. D = D	epletion. RM	I = Reduced Matrix, I	⊔ MS = Masl	ked Sand	Grains	s. ² Location: PL = Po	ore Lining, M = Matrix			
	Indicators:	,	Polyvalue Below				Indicators for Problem				
Histisol			(LRR S, T, U)	Surface (30)		1 cm Muck (A10) (I	-			
_	pipedon (A2)	•	Thin Dark Surfac	ce (S9) (LF	RR S, T, L	J)	2 cm Muck (A10) (I	-			
_	istic (A3)	•	Loamy Mucky M			-	Reduced Vertic (F1	. (8)			
Hydroge	en Sulfide (A4)	•	Loamy Gleyed M	Matrix (F2)			(outside MLRA 15	,			
Stratifie	d Layers (A5)	•	X Depleted Matrix	(F3)			Piedmont Floodpla	in Soils (F19)			
Organic	Bodies (A6) (LRR P	, T, U)	Redox Dark Surf	face (F6)			(LRR P, S, T)	,			
5 cm Mi	ucky Mineral (A7) (L l	RR P, T, U)	Depleted Dark S	urface (F7	·)		—— Anomalous Bright I	Anomalous Bright Loamy Soils (F20)			
Muck P	resence (A8) (LRR L	J)	Redox Depression	ons (F8)			(MLRA 153B)	A 153B)			
1 cm Mi	uck (A9) (LRR P. T)	-	Marl (F10) (LRR	<u>—</u>							
Deplete	d Below Dark Surfac	e (A11)	Depleted Ochric	c (F11) (MLRA 151) Very Shallow Dark Surface (TF12)							
Thick D	ark Surface (A12)		Iron-Manganese	se Masses (F12) Other (explain in remarks)							
	rairie Redox (A16)	•	(LRR O, P, T)								
(MLRA	150A)	•		e (F13) (LRR P, T, U)							
	Mucky Mineral (S1)		Delta Ochric (F1		-		³ Indicators of hydro	³ Indicators of hydrophytic vegetation and weltand hydrology must be			
(LRR O	•		Reduced Vertic (and weltand hydrol				
·	Gleyed Matrix (S4)		Piedmont Floodp	dplain Soils (F19) (MLRA 149A) present, unless disturbed or							
	Redox (S5)		Anomalous Brigh)	problematic	problematic			
	d Matrix (S6)	. T III	(MLRA 149A, 15	3C, 153D)						
Dark St	ırface (S7) (LRR P, \$	s, I, U)									
Restrictive	Layer (if observed)	:									
Туре:											
Depth (inch	es):			Hydric so	il present	t?	Yes X	No			
Remarks:											
i temants.											

Project/Site	Moro Creek Mi	tigation B	ank	City/	County:	Bunn	S	ampling Dat	te: 2018/10/02			
Applicant/Owner:						Sa	Sampling Point: Plot 59					
Investigator(s): Kayti Ewing, Joe Ledvina					Section, Township, Range: T8S R14W S24							
Landform (hillslope, terrace, etc.): none					Local relie	ef (concave, o	convex, r	none):	none			
Slope (%): 0	Lat:				Long:		D	atum:	WGS84			
Soil Map Unit Name	e	Weha	dkee si	ilt loam		_ NWI Clas	ssification	າ:	PFO1A			
Are climatic/hydrolo	gic conditions of	the site ty	pical for	r this time o	f the year? Yes	X No		(If no, exp	plain in remarks)			
Are vegetation							re "norm	al circumsta	ances" present?			
Are vegetation	, soil	, or h	ydrology	ynat	urally problema			s <u>X</u>	No			
									ny answers in Remarks.)			
SUMMARY OF FI				Ī	oling point loc	ations, tran	sects, ii	mportant f	eatures, etc.			
Hydrophytic vegeta		Yes_	<u>X</u>	No								
Hydric soil present?		Yes_	<u>X</u>	No	Is the sample							
Wetland hydrology	present?	Yes_	<u>X</u>	No	within a wetla	and?	Yes_	<u> </u>	No			
Remarks: (Explain alternative procedures here or in a separate report.)												
HYDROLOGY												
Wetland Hydrolog	_		d. de de l	!! 4!4	-1\	Sed	-	-	minimum of two required)			
Primary Indicators (•	is required				_		e Soil Crack	` '			
Surface Water (*			Aquatic Faur	* *	<u>—</u> · · · · · · · · · · · · · · · · · · ·						
High Water Table	e (A2)			-	its (B15) (LRR U) Drainage Patterns (B10)							
X Saturation (A3)			'	Hydrogen Sι	ulfide Odor (C1)Moss Trim Lines (B16)							
Water Marks (B					izospheres on Living Dry-Season Water Table (C2)							
Sediment Depos				Roots (C3)	Crayfish Burrows (C8)							
Drift Deposits (B	-		<u> </u>	resence of	Saturation Visible on Aerial Imagery (C9)							
Algal Mat or Cru					Reduction in Tilled							
Iron Deposits (B	·	on/ (D7)		Soils (C6)	urface (C7)	,						
Water-Stained L	le on Aerial Image	ыу (Б <i>і</i>)			Surface (C7) ain in Remarks) X FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)							
	. ,			⊃trier (⊏xpia	in in Remarks)	_		110111111033 (D0) (ERR 1, 0)			
Field Observation												
Surface water pres			No _	X Depth	· · · · · · · · · · · · · · · · · · ·	_	Wetl	and hydrol	logy present?			
Water table presen		<u>X</u>	No _		(inches)	_						
Saturation present?		<u>X</u>	No _	Depth	(inches)	_	Yes	X	No			
(includes capillary f												
Describe recorded	data (stream gau	ige, monito	oring we	ell, aerial ph	otos, previous i	nspections), i	if availab	le:				
Damada												
Remarks:			wai	tor in hol	e; basin topo	aranhy						
			wa	ter in non	e, basiii topt	grapily						

VEGETATION -- Use scientific names of plants.

/EGETATION Use scientific names of plant	ts.			Sampling Point: Plot 59			
	Absolute	Dominant	Indicator	Dominance Test Worksheet			
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	Number of Dominant Species			
1 None				that are OBL, FACW, or FAC: (A)			
2				Total Number of Dominant			
3				Species Across all Strata: (B)			
4				Percent of Dominant Species			
5				that are OBL, FACW, or FAC: 100.00% (A/B)			
6							
7				Prevalence Index Worksheet			
8				Total % Cover of:			
500/ 61 11		= Total Cove		OBL species			
50% of total cover:	20% c	of total cover	·	FACW species 110 x 2 = 220			
Sapling/Shrub Stratun (Plot size: 15-m radius)	1			FAC species 23 x 3 = 69			
1 None				FACU species <u>5</u> x 4 = <u>20</u>			
2				UPL species $0 \times 5 = 0$			
3				Column totals 138 (A) 309 (B)			
4				Prevalence Index = B/A = 2.24			
5				Hydrophytic Vegetation Indicators:			
6				1 - Rapid test for hydrophytic vegetation X 2 - Dominance test is >50%			
8							
8		= Total Cove		3 - Prevalence index is ≤3.0 and at least 80% X of total cover has indicator status*			
50% of total cover:		of total cover		<u> </u>			
Herb Stratum (Plot size: 1m ²		II total oove.	•	4 - Morphogical adaptations* (provide supporting data in Remarks or on a			
1 Mikania scandens	35	Υ	FACW	supporting data in Remarks of on a separate sheet)			
2 Bidens aristosa	35	<u> </u>	FACW	Problematic hydrophytic vegetation*			
3 Panicum verrucosum	15		FACW	(explain)			
4 Boehmeria cylindrica	15		FACW	-			
5 Pluchea camphorata	10		FACW	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic			
6 Eupatorium capillifolium	5		FACU	Definitions of Four Vegetation Strata:			
7 Eupatorium serotinum	5	N	FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm)			
8				or more in diameter at breast height (DBH),			
9				regardless of height.			
10				Sapling/Shrub - Woody plants, excluding			
11				vines, less than 3 in. DBH and greater than or			
12				equal to 3.28 ft (1 m) tall			
	120	=Total Cove	<u></u>	Herb – All herbaceous (non-woody) plants,			
50% of total cover: 60	0 20% c	of total cover	24	regardless of size, and woody plants less than 3.28			
Woody Vine Stratum (Plot size: 15-m radius))			ft tall			
1 Vitis rotundifolia	17	<u> </u>	FAC	Woody Vine – All woody vines greater than 3.28 ft			
2 Smilax rotundifolia	1	N	FAC	in height.			
3							
4							
5							
6				Hydrophytic			
500/ - 5 t- t-		= Total Cove		vegetation			
50% of total cover:	20% c	of total cover	3.6	present? Yes X No			
	: 1 ()						
Remarks: (Include photo numbers here or on a separa	ate sheet)						

Profile Des	cription: (Describe	to the depth	needed to docum	ent the ind	dicator o	r confi	irm the absence of ind	icators.)			
Depth	Matrix		Redo	ox Features	8						
(Inches)	Color (moist)	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks				
0 - 4	10YR 4/2	96	10YR 5/8	2	С	PL	silty clay loam				
			7.5YR 4/6	2	С	M					
4 - 12	10YR 5/2	98	10YR 5/6	2	С	M	sandy loam				
1							2				
	Concentration, D = D	Depletion, RM	= Reduced Matrix, I	MS = Mask	ed Sand	Grains		ore Lining, M = Matrix			
_	Indicators:		Polyvalue Below	/ Surface (S	S8)		Indicators for Problem				
Histisol	pipedon (A2)	_	(LRR S, T, U) Thin Dark Surface	ce (S0) (I E	реті	IV.	1 cm Muck (A10) (L 2 cm Muck (A10) (L	•			
_	istic (A3)	_	Loamy Mucky M					-			
_	en Sulfide (A4)	_	Loamy Gleyed N		(=::::0)		Reduced Vertic (F1 (outside MLRA 15				
	d Layers (A5)	_	X Depleted Matrix				Piedmont Floodplai				
	Bodies (A6) (LRR F	_	— · Redox Dark Sur	` '			(LRR P, S, T)	11 00113 (1 10)			
5 cm M	ucky Mineral (A7) (L	RR P, T, U)	Depleted Dark S	Surface (F7)		Anomalous Bright L	Anomalous Bright Loamy Soils (F20)			
Muck P	resence (A8) (LRR l	٦)	Redox Depressi	ons (F8)	, ,						
1 cm M	uck (A9) (LRR P. T)	_	Marl (F10) (LRR	•			Red Parent Materia	Red Parent Material (TF12)			
	d Below Dark Surfac	ce (A11)	Depleted Ochric	Very Shallow Dark Surface (TF12)							
Thick D	ark Surface (A12)		Iron-Manganese	e Masses (F12) Other (explain in remarks)							
	Prairie Redox (A16)	_	(LRR O, P, T)	- (F42) (LDD D T LL)							
(MLRA	-	_		e (F13) (LRR P, T, U) F17) (MLRA 151)							
Sandy l	Mucky Mineral (S1)	-	Reduced Vertic		-	150F		³ Indicators of hydrophytic vegetation			
— `	Gleyed Matrix (S4)	_					and weltand hydrol	and weltand hydrology must be A) present, unless disturbed or problematic			
	Redox (S5)	_	— Anomalous Brigl								
— ·	d Matrix (S6)		(MLRA 149A, 1	-		')	•				
Dark Sເ	ırface (S7) (LRR P, \$	S, T, U)									
Postriotivo	Layer (if observed)	١-	1								
Type:	Layer (II observed)).									
Depth (inch	es):			Hydric soi	l presen	t?	Yes X	No			
	,				•						
Remarks:											

Project/Site	Moro Creek Mitigation Bank City/0			County: Bunn		Sampling I	Sampling Date: 2018/					
Applicant/Owner:	Arkansas D	sas Department of Transportation		on State:	AR	Sampling F	oint:	Plot 60				
Investigator(s):	nvestigator(s): Kayti Ewing, Joe Ledvina Section, To							wnship, Range: T8S R14W S24				
Landform (hillslope	, terrace, etc.):	n	one		Local relie	f (concave,	convex, none):		none			
Slope (%): 0	Lat:				Long:		Datum:	V	VGS84			
Soil Map Unit Name	e	Wehadkee	silt lo	am		NWI Clas	ssification:	PF	O1A			
Are climatic/hydrolo	gic conditions of	the site typical	for this	time o	of the year? Yes	X No	(If no,	explain in r	emarks)			
Are vegetation							Are "normal circum	ıstances" p	resent?			
Are vegetation	, soil	, or hydrolo	ogy	nat	turally problemati		Yes <u>X</u>					
						-	If needed, explain	-	•			
SUMMARY OF FI		h site map sh	owing	samı	pling point loca	ations, tran	nsects, importan	t features	, etc.			
Hydrophytic vegeta	-	Yes X	_ No_									
Hydric soil present?		Yes	_ No_	X	Is the sample							
Wetland hydrology	present?	Yes	_ No_	Х	within a wetla	nd?	Yes	No	X			
Remarks: (Explain	alternative proce	dures here or in	a sepa	arate r	eport.)							
HYDROLOGY												
Wetland Hydrolog	v Indicators:					Se	condary Indicators	s (minimum	of two required)			
Primary Indicators		is required; che	ck all t	hat ap	ply)	00	Surface Soil Cr	•	rortwo required)			
-		, ,		-		_			ve Surface (B8)			
<u> </u>	Surface Water (A1) Aquatic Faun High Water Table (A2) Marl Deposit					Sparsely Vegetated Concave Surface (B8) (B15) (LRR U) Drainage Patterns (B10)						
Saturation (A3)	ic (AZ)			-	ulfide Odor (C1)	′ –	Moss Trim Line					
-						-			22)			
Water Marks (B Sediment Depos	-		Oxidiz Roots		Rhizospheres on Living Dry-Season Water Table (C2) Crayfish Burrows (C8)							
Drift Deposits (E			_		f Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9							
Algal Mat or Cru	-		_			magery (00)						
Iron Deposits (B				Recent Iron Reduction in Tilled Soils (C6)			X Geomorphic Position (D2) Shallow Aquitard (D3)					
	ole on Aerial Image	erv (B7)		n Muck Surface (C7)			FAC-Neutral Test (D5)					
Water-Stained L	_		_	Other (Explain in Remarks)			Sphagnum moss (D8) (LRR T, U)					
	. ,			(Ехріс	an in Kemarka)							
Field Observation									_			
Surface water pres		No			(inches)	-	Wetland hyd	rology pre	sent?			
Water table presen		No			(inches)	.						
Saturation present?		No	<u>X</u>	Depth	(inches)	.	Yes	No _	<u>X</u>			
(includes capillary f												
Describe recorded	data (stream gau	ige, monitoring v	νell, ae	∍rial ph	notos, previous in	spections),	if available:					
Remarks:												
			may	pass	s FAC-neutral	test						
I												

/EGETATION Use scientific names of plan	ıts.			Sampling Point: Plot 60
	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	Number of Dominant Species
1 Carpinus caroliniana	25	Υ	FAC	that are OBL, FACW, or FAC: 5 (A)
2 Liquidambar styraciflua	10	Y	FAC	Total Number of Dominant
3				Species Across all Strata: 6 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 83.33% (A/B)
6				· · · · · · · · · · · · · · · · · · ·
7				Prevalence Index Worksheet
8				Total % Cover of:
·	35 :	= Total Cove	r	OBL species 0 x 1 = 0
50% of total cover: 17		of total cover		FACW species 0 x 2 = 0
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 105 x 3 = 315
1 Liquidambar styraciflua	40	Υ	FAC	FACU species 1 x 4 = 4
2 Carpinus caroliniana	15	<u> </u>	FAC	UPL species 0 x 5 = 0
3 Quercus velutina	5	N		Column totals 106 (A) 319 (B)
4 Quercus nigra	2	N	FAC	Prevalence Index = B/A = 3.01
5 Callicarpa americana			FACU	Hydrophytic Vegetation Indicators:
6 Diospyros virginiana	1		FAC	1 - Rapid test for hydrophytic vegetation
7			170	X 2 - Dominance test is >50%
8	-			
0	64	= Total Cove		3 - Prevalence index is ≤3.0 and at least 80% of total cover has indicator status*
50% of total cover: 3		= rotal cove of total cover		
Herb Stratum (Plot size: 1m ²	1 20,000	JI total 65 vs.	12.0	4 - Morphogical adaptations* (provide
) 4	NI .		supporting data in Remarks or on a separate sheet)
1 Poaceae sp.	1	<u> </u>		
2				Problematic hydrophytic vegetation* (explain)
3				— (CAPIGIT)
4				*Indicators of hydric soil and wetland hydrology must be
5				present, unless disturbed or problematic
6				Definitions of Four Vegetation Strata:
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8				or more in diameter at breast height (DBH),
9				regardless of height.
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12				equal to 3.28 ft (1 m) tall
		=Total Cove		Herb – All herbaceous (non-woody) plants,
	.5 20% c	of total cover	0.2	regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius)		_	ft tall
1 Rubus laudatus	25	Υ		Woody Vine – All woody vines greater than 3.28 ft
2 Vitis rotundifolia	10	Υ	FAC	in height.
3 Smilax rotundifolia	2	N	FAC	
4				
5				
6	-			Hydrophytic
	37	= Total Cove	r	vegetation
50% of total cover: 18	3.5 20% c	of total cover	7.4	present? Yes X No
				l' — —
Remarks: (Include photo numbers here or on a separ	rate sheet)			.1
tomano. (morado prioto manifesta ministra de la companya de la com	uto c,			

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r confi	rm the absence of ind	icators.)			
Depth	Redo	ox Feature	S								
(Inches)	Color (moist)	%	Color (moist)	% Type ¹ Loc ²			Texture	Remarks			
0 - 2	10YR 4/3	98	7.5YR 4/6	2	С	M	silty clay loam				
2 - 8	10YR 4/3	49	7.5YR 4/6	2	С	М	silty clay loam				
	10YR 5/2	49									
8 - 12	10YR 4/3	59	10YR 5/8	2	С	М	silty clay				
	10YR 5/2	39									
¹ Type: C = 0	Concentration, D = D	epletion, RM	1 = Reduced Matrix, I	MS = Masl	ced Sand	Grains	s. ² Location: PL = Po	ore Lining, M = Matrix			
Hydric Soil	Indicators:		Polyvalue Below	/ Surface (S8)		Indicators for Problem	natic Hydric Soils ³ :			
Histisol	(A1)	-	(LRR S, T, U)	,	,		1 cm Muck (A10) (I	_RR O)			
Histic E	pipedon (A2)		Thin Dark Surface	ce (S9) (LF	RR S, T, L	J)	2 cm Muck (A10) (I	₋RR S)			
Black H	istic (A3)	•	Loamy Mucky M	lineral (F1)	(LRR O)		Reduced Vertic (F1	8)			
	en Sulfide (A4)	•	Loamy Gleyed N				(outside MLRA 15	0A, B)			
	d Layers (A5)		Depleted Matrix	` '			Piedmont Floodplai	in Soils (F19)			
	Bodies (A6) (LRR P		Redox Dark Sur				(LRR P, S, T)	_(LRR P, S, T)			
	ucky Mineral (A7) (LI			· ·)		Anomalous Bright Loamy Soils (F20)				
_	resence (A8) (LRR U	(נ	Redox Depressi	` '		(MLRA 153B)	::-! (TE40)				
	uck (A9) (LRR P. T)	- (0.44)	Marl (F10) (LRR	•	DA 454\			Red Parent Material (TF12) Very Shallow Dark Surface (TF12)			
	d Below Dark Surfac	e (ATT)	Depleted Ochric	Othern (
	ark Surface (A12)		Iron-Manganese (LRR O, P, T)	Ge Masses (F12)							
(MLRA	rairie Redox (A16)	•		e (F13) (LRR P, T, U)							
	-	•		(F17) (MLRA 151)							
(LRR O	Mucky Mineral (S1) . S)	•	Reduced Vertic		-	150E		³ Indicators of hydrophytic vegetation and weltand hydrology must be A) present, unless disturbed or			
─ _`	Gleyed Matrix (S4)	•					and weltand hydrol				
	Redox (S5)	•	 Anomalous Brigl				problematic				
	d Matrix (S6)		(MLRA 149A, 1	-		,	·				
Dark Su	ırface (S7) (LRR P, S	S, T, U)									
D to in the co	1 (°C - 1 1)										
	Layer (if observed)):									
Type: Depth (inch	ae).			Hydric soi	l procont	12	Yes	No X			
Deptil (illon				riyuric soi	i presem			NO_X_			
Remarks:											

Project/Site	Moro Creek Mitigation Bank City/0			County: Bunn		Sampling [Sampling Date: 2018					
Applicant/Owner:	Arkansas D	Arkansas Department of Transportation		on State:	AR	Sampling P	oint:	Plot 61				
Investigator(s):	Investigator(s): Kayti Ewing, Joe Ledvina Section,							ownship, Range: T8S R14W S24				
Landform (hillslope	, terrace, etc.):	n	one		Local relie	f (concave, o	convex, none):	ŗ	none			
Slope (%): 0	Lat:				Long:		Datum:	W	/GS84			
Soil Map Unit Name	e	Wehadkee	silt loa	am		NWI Clas	ssification:	PFC	D1A			
Are climatic/hydrolo	ogic conditions of	f the site typical	for this	time o	of the year? Yes	X No	(If no, e	explain in re	emarks)			
Are vegetation	, soil	, or hydrolo	gy	sig	nificantly disturbe	ed? A	Are "normal circum	stances" pr	resent?			
Are vegetation	, soil	, or hydrolo	gy	nat	turally problemati		Yes X					
						-	If needed, explain	=	•			
SUMMARY OF FI		ch site map sh	owing	samı	pling point loca	ations, tran	sects, importan	t features,	, etc.			
Hydrophytic vegeta	-	YesX	No_									
Hydric soil present?		Yes		X	Is the sample							
Wetland hydrology	present?	Yes	_ No_	Х	within a wetla	nd?	Yes	No	X			
Remarks: (Explain	alternative proce	dures here or in	a sepa	arate r	eport.)							
HYDROLOGY												
Wetland Hydrolog	y Indicators:					Sec	condary Indicators	(minimum	of two required)			
Primary Indicators	(minimum of one	is required; che	ck all tl	hat ap	ply)		Surface Soil Cra	acks (B6)	, ,			
Surface Water (A1)		Aquat	ic Fau	na (B13)	ve Surface (B8)						
 :					its (B15) (LRR U	_	Drainage Patter		, ,			
Saturation (A3)	,		_	-	ulfide Odor (C1)	_	Moss Trim Lines					
Water Marks (D1)				_	izospheres on Liv	ina —	 Dry-Season Wa		(2)			
Sediment Depos	-		Roots		iizosprierės ori Liv	y <u> </u>		Crayfish Burrows (C8)				
Drift Deposits (E			_		f Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9							
Algal Mat or Cru	ıst (B4)		Pocos	nt Iron	Poduction in Tillo	d -	X Geomorphic Position (D2)					
Iron Deposits (B				Recent Iron Reduction in Tilled Soils (C6)			Shallow Aquitard (D3)					
	ole on Aerial Image	ery (B7)	Thin N	Thin Muck Surface (C7)			FAC-Neutral Test (D5)					
Water-Stained L	_eaves (B9)		- Other	(Expla	ain in Remarks)		Sphagnum mos	s (D8) (LRF	≀ T, U)			
Field Observation					<u> </u>		_					
Field Observation Surface water pres		No	Y	Donth	(inches)		Wetland hydi	rology pro	sont?			
Water table presen		No			(inches)	-	wetiana nyai	lology pres	sent:			
Saturation present?		No		•	(inches)	-	Yes	No	X			
(includes capillary f				Depui	(1101103)	-						
Describe recorded		ugo monitoring v	woll oc	orial pk	notos provious ir	enoctions)	if available:					
Describe recorded	uata (Siream gat	age, monitoring v	well, ac	ilai pi	lotos, previous ir	ispections),	ii avallable.					
Remarks:												
Remarks.		r	nav n	ass t	he FAC-neutr	al test						
		•	nay p	400 (ino i Aco modeli	ui toot						

	Absolute	Dominant	Indicator	Dominance Test Worksheet
Tree Stratum (Plot size: 30-m radius)	% Cover	Species	Staus	
		-	FAC	Number of Dominant Species
1 Ilex opaca	10	<u> </u>	FAC	that are OBL, FACW, or FAC:(A)
2				Total Number of Dominant
3				Species Across all Strata: (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 80.00% (A/B)
6				
7				Prevalence Index Worksheet
8				Total % Cover of:
	10 =	Total Cove	r	OBL species 4 x 1 = 4
50% of total cover:		of total cover		FACW species 84 x 2 = 168
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 49 x 3 = 147
1 Liquidambar styraciflua	, 10	Υ	FAC	FACU species 2 x 4 = 8
	5	<u>'</u>	FAC	UPL species 0 x 5 = 0
2 Symplocos tinctoria				
3 Quercus nigra	3	<u>N</u>	FAC	Column totals 139 (A) 327 (B)
4 Betula nigra	3	<u>N</u>	FACW	Prevalence Index = B/A = 2.35
5 Ilex opaca	2	<u> </u>	FAC	Hydrophytic Vegetation Indicators:
6 Callicarpa americana	1	N	FACU	1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				3 - Prevalence index is ≤3.0 and at least 80%
	24 :	Total Cove		of total cover has indicator status*
50% of total cover: 1		of total cover		4 - Morphogical adaptations* (provide
Herb Stratum (Plot size: 1m ²)			supporting data in Remarks or on a
1 Chasmanthium laxum	60	Υ	FACW	separate sheet)
-			FACW	Problematic hydrophytic vegetation*
2 Coleataenia rigidula	20	N		(explain)
3 Dichanthelium dichotomum	10	<u>N</u>	FAC	(OXPIGIII)
4 Andropogon virginicus	5	<u>N</u>	FAC	*Indicators of hydric soil and wetland hydrology must be
5 Gratiola neglecta	3	N	OBL	present, unless disturbed or problematic
6 Eupatorium capillifolium	1	N	FACU	Definitions of Four Vegetation Strata:
7 Panicum verrucosum	1	N	FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8 Glyceria striata	1	N	OBL	or more in diameter at breast height (DBH),
9				regardless of height.
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12		·		equal to 3.28 ft (1 m) tall
	101	Total Cove		Herb – All herbaceous (non-woody) plants,
50% of total cover: 50		of total cover		regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius	2070 0	or total cover		ft tall
	,	V		
1 Rubus laudatus	55	<u>Y</u>		Woody Vine – All woody vines greater than 3.28 ft in height.
2 Smilax rotundifolia	2	N	FAC	in neight.
3 Smilax glauca	2	<u>N</u>	FAC	
4				
5				
6				Hydrophytic
	59 :	Total Cove	r	vegetation
50% of total cover: 29	9.5 20% c	of total cover	: 11.8	present? Yes X No
				'
Remarks: (Include photo numbers here or on a sepa	ate sheet)			
ternants. (include prioto numbers here or on a separ	ate sheet)			

Sampling Point: Plot 61

Profile Des	cription: (Describe	to the depth	n needed to docum	ent the inc	dicator o	r confi	rm the absence of in	dicators.)		
Depth	Matrix		Redo	ox Features	S					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 6	10YR 5/3	98	10YR 5/8	2	С	silty clay loam				
6 - 12	10YR 4/2	98	10YR 5/8	2	С	M	silty clay loam			
¹ Type: C = 0	Concentration, D = D	epletion, RM	= Reduced Matrix,	MS = Mask	ed Sand	Grains	. ² Location: PL =	Pore Lining, M = Matrix		
Hydric Soil	Indicators:		Polyvalue Below	/ Surface (S	S8)		Indicators for Proble	ematic Hydric Soils ³ :		
Histisol	(A1)	=	(LRR S, T, U)			-	1 cm Muck (A10)			
Histic E	pipedon (A2)	_	Thin Dark Surfa			-	2 cm Muck (A10)	(LRR S)		
	listic (A3)	_	Loamy Mucky M	, ,	(LRR O)		Reduced Vertic (F			
	en Sulfide (A4)	_	Loamy Gleyed N			-	(outside MLRA 1	I50A, B)		
	d Layers (A5)		Depleted Matrix	` '			Piedmont Floodpl	lain Soils (F19)		
	Bodies (A6) (LRR P	_	Redox Dark Sur			-	(LRR P, S, T)			
_	ucky Mineral (A7) (L l	· -	Depleted Dark S	•)			Anomalous Bright Loamy Soils (F20) (MLRA 153B)		
	resence (A8) (LRR L	·) _	Redox Depressi Marl (F10) (LRR	, ,		-	Red Parent Mater	riol (TE12)		
	uck (A9) (LRR P. T) d Below Dark Surfac	- - (Λ11)	Depleted Ochric	•	PA 151)	-	Very Shallow Dar			
	ark Surface (A12)	<u> </u>			-	-	Other (explain in	· ·		
			Iron-Manganese (LRR O, P, T)	: Masses (F	-12)	-	Other (explain in i	remarks)		
(MLRA	Prairie Redox (A16) 150A)	-	Umbric Surface	(F13) (LRF	R P. T. U))				
	Mucky Mineral (S1)	_	Delta Ochric (F1							
(LRR O		-	Reduced Vertic		-	150E		³ Indicators of hydrophytic vegetation		
	Gleyed Matrix (S4)	-					and weltand hydrology must be A) present, unless disturbed or			
Sandy I	Redox (S5)	_	Anomalous Brig				problematic	iotal boa of		
Strippe	d Matrix (S6)		(MLRA 149A, 1	-	•	,				
Dark Sเ	urface (S7) (LRR P, \$	S, T, U)								
Postrictivo	Layer (if observed)									
Type:	Layer (II observed)) .								
Depth (inch	es).		_	Hydric soi	l present	t?	Yes	No X		
2 op (o				,	. p					
Remarks:										

Project/Site	Site Moro Creek Mitigation Bank City/Co			y/County:	Bunn	Sampling [Sampling Date: 2018/10/03		
Applicant/Owner:	Arkansas De	partment of T	 Γransportati	i on State:	AR	Sampling P	Point: Plot 6	2	
Investigator(s):	Kayti E	wing, Joe Led	dvina	Section	າ, Township, R	Range:	T8S R14W S24		
Landform (hillslope	, terrace, etc.):	r	none	Local reli	Local relief (concave, convex, none):				
Slope (%): 0	Lat:			Long:		Datum:	WGS84		
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Clas	ssification:	PFO1A		
Are climatic/hydrological	=					(If no, e	explain in remarks)		
Are vegetation				gnificantly distur			nstances" present?		
Are vegetation	, soil	, or hydrol	ogyna	aturally problema		Yes X			
			~				any answers in Rer	narks.)	
SUMMARY OF FI				npling point lo	cations, trans	sects, importan	t features, etc.		
Hydrophytic vegeta	-	Yes X	_ No	4					
Hydric soil present		Yes X	_ No	Is the sample		V	N- V		
Wetland hydrology	•	Yes	NoX_	within a wet	land?	Yes	_ No <u>X</u>		
Remarks: (Explain	alternative proced	ures here or ir	า a separate	report.)					
HYDROLOGY									
Wetland Hydrolog	y Indicators:				Sec	condary Indicators	s (minimum of two re	auired)	
Primary Indicators		s required; che	eck all that a	pply)	-	Surface Soil Cra	·	,441.52,	
Surface Water (•	Aquatic Fau		_		ated Concave Surfac	e (B8)	
High Water Tab	` '	_		osits (B15) (LRR	U)	Drainage Patter		0 (50)	
Saturation (A3)		_	_	Sulfide Odor (C1)		Moss Trim Lines			
Water Marks (B		_	_			Dry-Season Wa			
Sediment Depos	,		Oxidized Rl Roots (C3)	Rhizospheres on L	.iving <u> </u>	Crayfish Burrow			
Drift Deposits (E		_		of Reduced Iron (0	C4)		ole on Aerial Imagery	(C9)	
Algal Mat or Cru	-	_		·		X Geomorphic Po		(00)	
Iron Deposits (B			Recent Iron Soils (C6)	n Reduction in Till	led <u> </u>	Shallow Aquitar			
	ole on Aerial Imager	-v (B7)	_ ` ′	Surface (C7)	_	FAC-Neutral Te			
Water-Stained L			_	lain in Remarks)	_		ss (D8) (LRR T, U)		
			_ ` ` ` .	,		_			
Field Observation		No	V Dont	- (inches)		Matland hyd	learn nuaeant2		
Surface water pres Water table presen	_	No No		h (inches) h (inches)	-	wetianu nyu	rology present?		
Saturation present?	_	No No		n (incnes) h (inches)	-	Vac	No X		
(includes capillary f	-			1 (Inches)	-	Yes	NO A		
Describe recorded		ne monitoring	well serial r	shotos previous	inenections) i	if available:			
Describe recorded	udla (Sileain gaug	e, monitoring	Well, actial p	motos, previous	ilispections), i	il dvallable.			
Remarks:									

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	
	15	Υ	FAC	Number of Dominant Species that are OBL. FACW. or FAC: 3 (A)
			FAC	that are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3	· 			Species Across all Strata: (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 75.00% (A/B)
6				
7				Prevalence Index Worksheet
8				Total % Cover of:
	15	Total Cove		OBL species 0 x 1 = 0
50% of total cover: 7		of total cover		FACW species $0 \times 2 = 0$
Sapling/Shrub Stratun (Plot size: 15-m radius	1 2070	71 10101 00101		FAC species 115 x 3 = 345
`	./	V	EAC	<u> </u>
1 Liquidambar styraciflua	70	<u>Y</u>	FAC	FACU species 16 x 4 = 64
2 Hamamelis virginiana	15	N	FACU	UPL species x 5 =0
3 Carpinus caroliniana	5	<u>N</u>	FAC	Column totals(A)(B)
4 Symplocos tinctoria	2	N	FAC	Prevalence Index = B/A = 3.12
5 Callicarpa americana	1	N	FACU	Hydrophytic Vegetation Indicators:
6	<u> </u>			1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				3 - Prevalence index is ≤3.0 and at least 80%
· -	93	Total Cove		of total cover has indicator status*
50% of total cover: 4		of total cover		
	2070 0	or total cover	10.0	4 - Morphogical adaptations* (provide
	,)			supporting data in Remarks or on a
1 Poaceae sp.	2	N		separate sheet)
2				Problematic hydrophytic vegetation*
3				(explain)
4	<u> </u>			*Indicators of hydric soil and wetland hydrology must be
5				present, unless disturbed or problematic
6				Definitions of Four Vegetation Strata:
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
				or more in diameter at breast height (DBH),
8				regardless of height.
9				
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12				equal to 3.28 ft (1 m) tall
	2	Total Cove	<u></u>	Herb – All herbaceous (non-woody) plants,
50% of total cover:		of total cover		regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius)	50101		ft tall
	20	v		
	30	<u>Y</u>		Woody Vine – All woody vines greater than 3.28 ft
2 Vitis rotundifolia	15	<u>Y</u>	FAC	in height.
3 Smilax rotundifolia	5	N	FAC	
4 Smilax glauca	2	N	FAC	
5 Bignonia capreolata	1	N	FAC	
6				Hydrophytic
-	53	Total Cove	r	vegetation
50% of total cover: 2		of total cover		present? Yes X No
00 % of total cover	2070	or total cover	10.0	163 X NO
Domarka: (Include phate number- bar-	rata aba-1\			
Remarks: (Include photo numbers here or on a sepa	rate sneet)			

Sampling Point: Plot 62

Profile Des	cription: (Describe	to the depti	n needed to docum	ent the in	dicator o	r confi	irm the absence of ind	icators.)		
Depth	Matrix		Redo	ox Feature	6					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 4	10YR 3/2	98	7.5YR 4/6	2	С	М	silty clay loam			
4 - 8	10YR 3/2	98	7.5YR 4/6	2	С	М	clay loam			
8 - 12	10YR 3/2	88	7.5YR 4/6	2	С	М	clay			
	10YR 5/1	18								
¹ Type: C = 0	Concentration, D = D	epletion, RM	= Reduced Matrix, I	MS = Masł	ed Sand	Grains	s. ² Location: PL = Po	ore Lining, M = Matrix		
Hydric Soil	Indicators:		Polyvalue Below	/ Surface (S8)		Indicators for Problem	natic Hydric Soils³:		
Histisol	(A1)	-	(LRR S, T, U)			•	1 cm Muck (A10) (L	•		
_	pipedon (A2)	_	Thin Dark Surfac				2 cm Muck (A10) (L	RR S)		
	istic (A3)	-	Loamy Mucky M		(LRR O)		Reduced Vertic (F1	•		
	en Sulfide (A4)	-	Loamy Gleyed M	` '			(outside MLRA 15	0A, B)		
	d Layers (A5)		X Depleted Matrix	` '			Piedmont Floodplai	n Soils (F19)		
	Bodies (A6) (LRR P	-	Redox Dark Surf		`		(LRR P, S, T)			
	ucky Mineral (A7) (Li	_	Depleted Dark S	-)		Anomalous Bright L	oamy Soils (F20)		
_	resence (A8) (LRR U uck (A9) (LRR P. T)	') -	Marl (F10) (LRR	Depressions (F8) (MLRA 153B) 0) (LRR U) Red Parent Material (TF12)						
	d Below Dark Surfac	<u>-</u> - (Δ11)		hric (F11) (MLRA 151) Very Shallow Dark Surface (TF1:						
	ark Surface (A12)	_			_	•	Other (explain in re	•		
			Iron-Manganese (LRR O, P, T)	iviasses (i	-12)	•		manto)		
(MLRA	rairie Redox (A16) 150A)	-	Umbric Surface	(F13) (LRF	R P, T, U)					
	иску Mineral (S1)	-	Delta Ochric (F1				_	³ Indicators of hydrophytic vegetation and weltand hydrology must be A) present, unless disturbed or		
(LRR O		=	Reduced Vertic	(F18) (MLF	RA 150A,	150E	_			
Sandy (Gleyed Matrix (S4)	-	Piedmont Flood	plain Soils	(F19) (M L	LRA 14	and welland nydrol 1 9A) present. unless dist			
Sandy F	Redox (S5)	_	— Anomalous Brigh				problematic			
Stripped	l Matrix (S6)	_	(MLRA 149A, 1	53C, 153D)					
Dark Sເ	rface (S7) (LRR P, S	S, T, U)								
Restrictive	Layer (if observed)	:								
Type:		•								
Depth (inch	es):			Hydric soi	l present	t?	Yes X	No		
Remarks:										

Project/Site	Moro Creek Mi	tigation Ba	ank	City	/County:	Bunn	Sampling Da	ate: 2018/10/03
Applicant/Owner:	Arkansas D	epartment of Transportation			on State:	AR	Sampling Poi	int: Plot 63
Investigator(s):	Kayti	Ewing, Joe Ledvina Se			Section,	, Township, F	T8S R14W S24	
Landform (hillslope	, terrace, etc.):		none		Local relie	ef (concave, o	convex, none):	none
Slope (%): 0	Lat:				Long:		Datum:	WGS84
Soil Map Unit Name	e	Weha	dkee silt	loam		NWI Clas	ssification:	PFO1A
Are climatic/hydrolo	ogic conditions o	f the site ty	pical for th	nis time o	of the year? Yes	X No	(If no, ex	rplain in remarks)
Are vegetation	, soil	, or hy	/drology_	sig	nificantly disturb	ed? A	re "normal circumst	ances" present?
Are vegetation	, soil	, or hy	/drology_	nat	turally problema	tic?	Yes X	No
								ny answers in Remarks.)
		ch site ma			pling point loc	ations, tran	sects, important t	features, etc.
Hydrophytic vegeta	•	Yes_		o X				
Hydric soil present		Yes_	X N	0	Is the sample			
Wetland hydrology	present?	Yes_	<u>X</u> N	0	within a wetla	and?	Yes	No <u>X</u>
Remarks: (Explain	alternative proce	dures here	or in a se	parate r	eport.)			
HYDROLOGY								
Wetland Hydrolog	v Indicators:					Sei	condary Indicators (minimum of two required)
Primary Indicators	·-	is required	l: check a	ll that an	(ylac	061	Surface Soil Crack	
Surface Water (•	ına (B13)	_		ed Concave Surface (B8)
High Water Tab	ŕ				sits (B15) (LRR I	n –	Drainage Patterns	
X Saturation (A3)	ie (A2)			-	fulfide Odor (C1)	_	Moss Trim Lines (
Water Marks (B	1)			-		_	Dry-Season Wate	
Sediment Depos	•			idized Rh ots (C3)	nizospheres on Li	ving	Crayfish Burrows	
Drift Deposits (E				, ,	f Reduced Iron (C	<u> </u>		on Aerial Imagery (C9)
Algal Mat or Cru	•						Catalation Visible X Geomorphic Posit	
Iron Deposits (B				cent Iron Is (C6)	Reduction in Tille	ed <u> </u>	Shallow Aquitard	
	ole on Aerial Imag	ery (R7)		` ,	Surface (C7)		FAC-Neutral Test	
Water-Stained L	_	Siy (Di)			ain in Remarks)		Sphagnum moss	` '
_	. ,			ei (Expia	alli ili iXelliaiks)	<u> </u>	— Opinagnam moos	——————————————————————————————————————
Field Observation								
Surface water pres				_	(inches)	_	Wetland hydro	logy present?
Water table presen					(inches)	_		
Saturation present?		<u> X</u>	No	_ Depth	(inches) 3	_	Yes X	No
(includes capillary f								
Describe recorded	data (stream gau	ıge, monito	ring well,	aerial ph	hotos, previous i	nspections), i	if available:	
Remarks:								

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 63 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) Percent of Dominant Species **50.00%** (A/B) that are OBL, FACW, or FAC: **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species x 1 =20% of total cover: **FACW** species 50% of total cover: 20 x 2 =Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species x 3 = 1 Ilex opaca FACU species 57 228 **FAC** x 4 = Liquidambar styraciflua FAC UPL species 3 x 5 = 15 Column totals **102** (A) 347 (B) Prevalence Index = B/A = 3.40 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0 and at least 80% = Total Cover of total cover has indicator status* 50% of total cover: 20% of total cover: 8.0 4 - Morphogical adaptations* (provide Herb Stratum (Plot size: supporting data in Remarks or on a separate sheet) 1 Eupatorium capillifolium **FACU** Problematic hydrophytic vegetation* Panicum verrucosum 20 **FACW** (explain) 3 Eupatorium serotinum 6 **FAC** 4 Senecio hieraciifolius 5 **FAC** *Indicators of hydric soil and wetland hydrology must be Rhus copallinum **UPL** present, unless disturbed or problematic Callicarpa americana **FACU Definitions of Four Vegetation Strata:** Ν Tree – Woody plants, excluding vines, 3 in. (7.6 cm) Unknown fern Ν or more in diameter at breast height (DBH), Gratiola neglecta OBL regardless of height. 9 Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall Herb – All herbaceous (non-woody) plants, = Total Cover regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: 18.8 (Plot size: 15-m radius Woody Vine Stratum **FAC** Woody Vine – All woody vines greater than 3.28 ft Vitis rotundifolia Rubus laudatus FAC Smilax rotundifolia 4 5 Hydrophytic 8 = Total Cover vegetation 20% of total cover: 1.6 present? Yes No X 50% of total cover:

Remarks: (Include photo numbers here or on a separate sheet)

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r confi	irm the absence of ind	icators.)		
Depth	Matrix		Redo	ox Feature	S					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 3	10YR 4/3	58	10YR 4/6	2	С	М	silty clay loam			
	10YR 4/2	20								
	10YR 5/1	20						redox depletion?		
3 - 12	10YR 6/1	98	10YR 4/6	2	С	М	sandy clay			
¹ Type: C = 0	Concentration, D = D	epletion RM	I = Reduced Matrix	MS = Mask	ed Sand	Grains	s. ² l ocation: PL = Po	ore Lining, M = Matrix		
	Indicators:						Indicators for Problen			
Histisol			Polyvalue Below (LRR S, T, U)	/ Surrace (58)		1 cm Muck (A10) (I	-		
—	pipedon (A2)	-	Thin Dark Surfac	ce (S9) (LF	RR S. T. U	J)	2 cm Muck (A10) (I	-		
_	istic (A3)	-	—— Loamy Mucky M			-	Reduced Vertic (F1	-		
_	en Sulfide (A4)	-	Loamy Gleyed N		` ,		(outside MLRA 15			
	d Layers (A5)	-	X Depleted Matrix				—— ` Piedmont Floodplai			
	Bodies (A6) (LRR P	, T, U)	 Redox Dark Sur	face (F6)			(LRR P, S, T)	11 00113 (1 10)		
5 cm M	ucky Mineral (A7) (L l	RR P, T, U)	 Depleted Dark S	Surface (F7)		Anomalous Bright L	oamy Soils (F20)		
Muck P	resence (A8) (LRR L	J)	Redox Depressi	ons (F8)			(MLRA 153B)	_(MLRA 153B)		
1 cm M	uck (A9) (LRR P. T)	•	 Marl (F10) (LRR	2 U)		Red Parent Materia	al (TF12)			
Deplete	Depleted Ochric	(F11) (ML	RA 151)		Very Shallow Dark	Surface (TF12)				
Thick D	ark Surface (A12)	-	Iron-Manganese	Masses (I	- 12)		Other (explain in re	marks)		
Coast F	Prairie Redox (A16)	-	(LRR O, P, T)		•					
(MLRA	150A)	-	Umbric Surface	(F13) (LRF	R P, T, U))				
Sandy I	Mucky Mineral (S1)	-	Delta Ochric (F1	7) (MLRA	151)		31	³ Indicators of hydrophytic vegetation and weltand hydrology must be A) present, unless disturbed or		
(LRR O	, S)		Reduced Vertic				and weltand hydrol			
Sandy (Gleyed Matrix (S4)	-	Piedmont Flood	plain Soils	(F19) (MI	LRA 14	19A) present, unless dis			
	Redox (S5)		Anomalous Brig))	problematic			
	d Matrix (S6)	-	(MLRA 149A, 1	53C, 153D)					
Dark Su	ırface (S7) (LRR P, S	S, T, U)								
Restrictive	Layer (if observed)	:								
Туре:	,									
Depth (inch	es):			Hydric soi	l presen	t?	Yes X	No		
							·	·		
Remarks:										

Project/Site	Moro Creek Mitig	ation Bank	City/	County:	Bunn	Samplin	Sampling Date: 2018/10/	
Applicant/Owner:	Arkansas Dep	artment of T	ransportatio	n State:	AR	Samplin	g Point:_	Plot 64
Investigator(s):	Kayti Ew	ing, Joe Led	lvina	Section,	Township, Rai	nge:	T8S F	R14W S24
Landform (hillslope	, terrace, etc.):	n	one	Local relief	f (concave, co	nvex, none):		none
Slope (%): 0	Lat:			Long:		Datum:		WGS84
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Classi	fication:		PFO1A
Are climatic/hydrolo	ogic conditions of th	e site typical	for this time o	of the year? Yes	X No	(If n	o, explain	in remarks)
Are vegetation	, soil	, or hydrolo	ogysig	nificantly disturbe	d? Are	normal circ	umstance	s" present?
Are vegetation	, soil	, or hydrolo	ogynat	urally problemation		Yes >		lo
					•	-	-	swers in Remarks.)
SUMMARY OF FI		site map sh	owing sam	oling point loca	tions, transe	ects, import	ant featu	ires, etc.
Hydrophytic vegeta	•	Yes X	No					
Hydric soil present?		Yes X	_ No	Is the sampled				
Wetland hydrology	present?	Yes X	No	within a wetlar	nd?	Yes X	<u> </u>	lo
Remarks: (Explain	alternative procedu	res here or in	a separate re	eport.)				
HYDROLOGY								
Wetland Hydrolog	y Indicators:				Seco	ndary Indicat	tors (minin	num of two required)
Primary Indicators	(minimum of one is	required; che	ck all that ap	ply)		Surface Soil	Cracks (B	6)
Surface Water (A1)	_	Aquatic Fau	na (B13)	<u>—</u>	Sparsely Veg	getated Co	ncave Surface (B8)
High Water Tab	High Water Table (A2) Marl Deposits)	Drainage Pa	tterns (B10	0)
Saturation (A3)		_	Hydrogen Su	ulfide Odor (C1)	<u>—</u>	Moss Trim Li	ines (B16)	
Water Marks (B	1)		Oxidized Rh	izospheres on Livi	ing	Dry-Season	Water Tab	le (C2)
Sediment Depos	sits (B2)		Roots (C3)	•	<u> </u>	Crayfish Bur	rows (C8)	
Drift Deposits (E	33)		Presence of	Reduced Iron (C4	·)	Saturation V	isible on A	erial Imagery (C9)
Algal Mat or Cru	ıst (B4)		Recent Iron	Reduction in Tilled	<u>X</u>	Geomorphic	Position ([D2)
Iron Deposits (B	5)	_	Soils (C6)			Shallow Aqu	itard (D3)	
Inundation Visib	le on Aerial Imagery	(B7)	Thin Muck S	urface (C7)	<u>X</u>	FAC-Neutral	Test (D5)	
Water-Stained L	eaves (B9)		Other (Expla	in in Remarks)	<u>—</u>	Sphagnum n	noss (D8)	(LRR T, U)
Field Observation	s:							
Surface water pres		No	X Depth	(inches)		Wetland h	ydrology	present?
Water table presen	t? Yes	No	X Depth	· · · · — — —				
Saturation present?		No	X Depth	· · · · · · · · · · · · · · · · · · ·	Y	es X	No	
(includes capillary f	ringe)			·				
Describe recorded	data (stream gauge	e, monitoring v	well, aerial ph	otos, previous in	spections), if a	available:		
Remarks:								
Ī								

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 64 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **15** x 1 = 50% of total cover: 20% of total cover: **FACW** species 82 x 2 =164 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species **15** x 3 = 45 1 Liquidambar styraciflua FACU species 0 **FAC** x 4 = **FAC** UPL species llex opaca x 5 = 0 Column totals Diospyros virginiana **FAC 112** (A) **224** (B) Prevalence Index = B/A = 2.00 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation **X** 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0 and at least 80% = Total Cover X of total cover has indicator status* 50% of total cover: 20% of total cover: 0.6 4 - Morphogical adaptations* (provide Herb Stratum (Plot size: supporting data in Remarks or on a separate sheet) 1 Rhynchospora inexpansa **FACW** Problematic hydrophytic vegetation* 40 **FACW** Panicum verrucosum (explain) Rhynchospora glomerata 15 3 **OBL** Eupatorium rotundifolium 5 Ν **FAC** *Indicators of hydric soil and wetland hydrology must be Coleataenia rigidula **FACW** present, unless disturbed or problematic Dichanthelium dichotomum **FAC Definitions of Four Vegetation Strata:** Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall Herb – All herbaceous (non-woody) plants, = Total Cover regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: **20.8** (Plot size: 15-m radius) Woody Vine Stratum Smilax rotundifolia **FAC** Woody Vine – All woody vines greater than 3.28 ft Vitis rotundifolia **FAC** 3 4 5 Hydrophytic 5 = Total Cover vegetation Yes X No ____ 2.5 20% of total cover: present? 50% of total cover: Remarks: (Include photo numbers here or on a separate sheet)

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the inc	dicator o	r confi	irm the absence of ind	icators.)		
Depth	Matrix		Redo	ox Features						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 6	10YR 6/1	20	7.5YR 4/6	2	С	sandy clay				
	10YR 5/2	76	10YR 6/8	2	С	М				
6 - 12	10YR 6/1	50	10YR 6/8	30	С	М	sandy clay			
	10YR 7/1	20								
	Concentration, D = D	epletion, RM	I = Reduced Matrix,	MS = Mask	ed Sand	Grains		ore Lining, M = Matrix		
1	Indicators:		Polyvalue Below	/ Surface (S	S8)		Indicators for Problem	•		
Histisol	•	-	(LRR S, T, U)	(00) (1.5	.D.O. T. I		1 cm Muck (A10) (I	· ·		
	pipedon (A2)	-	Thin Dark Surface			-	2 cm Muck (A10) (I	•		
	istic (A3)	-	Loamy Mucky M		(LKK U)	1	Reduced Vertic (F1 (outside MLRA 15	•		
	en Sulfide (A4) d Layers (A5)	-	Loamy Gleyed N Depleted Matrix				 `	•		
	: Bodies (A6) (LRR F	P. T. U)	Redox Dark Sur	` '			Piedmont Floodpla (LRR P, S, T)	in Soils (F19)		
<u> </u>	ucky Mineral (A7) (L l	· · · · · ·	Depleted Dark S)			camy Soils (E20)		
	resence (A8) (LRR L	-	' Redox Depressi	•	,		Anomalous Bright Loamy Soils (F20) (MLRA 153B)			
1 cm M	 Marl (F10) (LRR	, ,			Red Parent Materia	al (TF12)				
Depleted Below Dark Surface (A11) Depleted Och				(F11) (ML	RA 151)		Very Shallow Dark	Surface (TF12)		
Thick D	ark Surface (A12)	•	 Iron-Manganese	Masses (F	- 12)		Other (explain in re	emarks)		
Coast F	rairie Redox (A16)	-	(LRR O, P, T)	`	•					
(MLRA	150A)	-	Umbric Surface	(F13) (LRF	R P, T, U))				
	Mucky Mineral (S1)	-	Delta Ochric (F1		-		³ Indicators of bydro	onbytic vegetation		
LRR O	-	-	Reduced Vertic	. , ,			procent, unloss distarbed of			
	Gleyed Matrix (S4)	-	Piedmont Flood	plain Soils	(F19) (M I	LRA 14				
	Redox (S5)		Anomalous Brigi	-	•))	problematic			
	d Matrix (S6) ırface (S7) (LRR P, 	. T II\	(MLRA 149A, 1	53C, 153D))					
Daik St	inace (S7) (LKK P, C	5, 1, 0)								
Restrictive	Layer (if observed)):								
Туре:										
Depth (inch	es):			Hydric soi	l presen	t?	Yes X	No		
Remarks:			•							

Project/Site	Moro Creek N	litigation Ba	nk	City	/County:	Bunn	inn Sampling Date: 2018/10/08				
Applicant/Owner:	Arkansas	Department of Transportation			on State:	AR	Sampling Poin	t: Plot 65			
Investigator(s):	Kayt	Kayti Ewing, Joe Ledvina Section, To				Township, R	wnship, Range: T8S R14W S24				
Landform (hillslope	, terrace, etc.):		none		Local relie	ef (concave, c	onvex, none):	none			
Slope (%): 0	Lat:				Long:		Datum:	WGS84			
Soil Map Unit Name	e	Wehad	dkee silt lo	oam		NWI Clas	sification:	PFO1A			
Are climatic/hydrolo	gic conditions	of the site typ	ical for thi	s time	of the year? Yes	X No	(If no, expl	lain in remarks)			
Are vegetation	, soil	, or hy	drology	sig	nificantly disturb	ed? Aı	re "normal circumstar	nces" present?			
Are vegetation	, soil	, or hy	drology	na	turally problemat	tic?	Yes X	No			
								answers in Remarks.)			
		ach site ma	-		pling point loc	ations, trans	sects, important fe	atures, etc.			
Hydrophytic vegeta		Yes		<u> </u>							
Hydric soil present			X No		Is the sample						
Wetland hydrology	present?	Yes	No	<u> </u>	within a wetla	and?	Yes	No X			
Remarks: (Explain	alternative proc	edures here	or in a sep	oarate r	report.)						
HYDROLOGY											
Wetland Hydrolog	y Indicators:					Sec	condary Indicators (m	inimum of two required)			
Primary Indicators	(minimum of on	e is required:	; check all	that ap	pply)		Surface Soil Cracks	(B6)			
Surface Water (A1)		Aqua	atic Fau	ına (B13)		Sparsely Vegetated	Concave Surface (B8)			
High Water Tab	le (A2)		Marl	Depos	sits (B15) (LRR L	J)	Drainage Patterns (B10)			
Saturation (A3)			Hydı	rogen S	ulfide Odor (C1)		Moss Trim Lines (B	16)			
Water Marks (B	1)		Oxid	lized Rh	nizospheres on Liv	vina	Dry-Season Water ⁻	Γable (C2)			
Sediment Depos	sits (B2)			ts (C3)	•		Crayfish Burrows (C	(8)			
Drift Deposits (E	33)		Pres	ence of	f Reduced Iron (C	4)	Saturation Visible o	n Aerial Imagery (C9)			
Algal Mat or Cru	ıst (B4)		Rece	ent Iron	Reduction in Tille	ed)	Ceomorphic Positio	n (D2)			
Iron Deposits (B	5)			s (C6)			Shallow Aquitard (D	3)			
Inundation Visib	le on Aerial Ima	gery (B7)	Thin	Muck S	Surface (C7)		FAC-Neutral Test ([D5)			
Water-Stained L	.eaves (B9)		Othe	er (Expl	ain in Remarks)		Sphagnum moss (D	8) (LRR T, U)			
Field Observation	 s:							-			
Surface water pres			No X	Depth	(inches)		Wetland hydrolo	av present?			
Water table presen				_	(inches)	-	•	0,71			
Saturation present?				_	(inches)	-	Yes	No X			
(includes capillary f	ringe)			-		_					
Describe recorded	data (stream ga	auge, monitor	ring well, a	erial pl	hotos, previous i	nspections), it	f available:				
Remarks:											
I											

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 65 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) Percent of Dominant Species 50.00% (A/B) that are OBL, FACW, or FAC: **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **0** x 1 = 20% of total cover: **FACW** species 50% of total cover: 26 x 2 =52 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species 45 x 3 = 135 1 Carpinus caroliniana FACU species 61 244 **FAC** x 4 = Acer rubrum FAC **UPL** species 0 x 5 = 0 **132** (A) 3 Column totals **431** (B) Prevalence Index = B/A = 3.27 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0 and at least 80% = Total Cover of total cover has indicator status* 50% of total cover: 1.5 20% of total cover: 0.6 4 - Morphogical adaptations* (provide (Plot size: 1m² Herb Stratum supporting data in Remarks or on a separate sheet) 1 Berchemia scandens **FAC** Problematic hydrophytic vegetation* 35 **FACU** 2 Phytolacca americana (explain) 25 **FACU** 3 Callicarpa americana Arundinaria gigantea 15 **FACW** *Indicators of hydric soil and wetland hydrology must be Panicum verrucosum **FACW** present, unless disturbed or problematic Eupatorium capillifolium 1 **FACU Definitions of Four Vegetation Strata:** Ν Carex sp. Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. 9 Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall Herb – All herbaceous (non-woody) plants, = Total Cover 127 regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: **25.4** ft tall (Plot size: 15-m radius) Woody Vine Stratum Vitis cinerea **FAC** Woody Vine – All woody vines greater than 3.28 ft **FACW** in height. Brunnichia ovata FAC Vitis rotundifolia 4 5 Hydrophytic 3 = Total Cover vegetation

20% of total cover: 0.6

Remarks: (Include photo numbers here or on a separate sheet)

50% of total cover:

1.5

Yes No X

present?

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r confi	irm the absence of inc	licators.)			
Depth	Matrix		Redo	ox Feature	s						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 2	10YR 3/2	98	10YR 4/6	2	С	М	clay loam				
2 - 6	10YR 4/2	49	10YR 5/6	2	С	М	silty clay				
	10YR 4/3	49									
6 - 12	10YR 5/3	58	10YR 5/8	4	С	М	silty clay				
	10YR 5/2	38									
¹ Type: C = 0	Concentration. D = D	epletion. RM	1 = Reduced Matrix, I	MS = Masl	ked Sand	Grains	s. ² Location: PL = P	ore Lining, M = Matrix			
	Indicators:	,	Polyvalue Below				Indicators for Problem				
Histisol			(LRR S, T, U)	/ Surface (30)		1 cm Muck (A10) (_			
_	pipedon (A2)	•	Thin Dark Surfac	ce (S9) (LF	RR S. T. U	J)	2 cm Muck (A10) (·			
_	istic (A3)	•	—— Loamy Mucky M			-	Reduced Vertic (F	-			
_	en Sulfide (A4)	•	Loamy Gleyed M				(outside MLRA 15	*			
	d Layers (A5)	•	X Depleted Matrix	(F3)			Piedmont Floodpla	in Soils (F19)			
Organic	Bodies (A6) (LRR P	P, T, U)	Redox Dark Surf	face (F6)			(LRR P, S, T)				
5 cm M	ucky Mineral (A7) (L l	RR P, T, U)	Depleted Dark S	Surface (F7	·)		Anomalous Bright	Anomalous Bright Loamy Soils (F20)			
Muck P	resence (A8) (LRR L	J)	Redox Depression	ons (F8)			(MLRA 153B)	_(MLRA 153B)			
1 cm M	uck (A9) (LRR P. T)	· · · · · · · · · · · · · · · · · · ·	Marl (F10) (LRR	(U)			Red Parent Materia	al (TF12)			
Deplete	Depleted Ochric	(F11) (ML	RA 151)		Very Shallow Dark	Surface (TF12)					
Thick D	ark Surface (A12)		Iron-Manganese	Masses (I	F12)		Other (explain in re	emarks)			
Coast P	rairie Redox (A16)	-	(LRR O, P, T)								
(MLRA	150A)	-	Umbric Surface	(F13) (LRF	R P, T, U)						
Sandy N	Mucky Mineral (S1)		Delta Ochric (F1	7) (MLRA	151)		3 Indicators of budge	³ Indicators of hydrophytic vegetation and weltand hydrology must be A) present, unless disturbed or			
(LRR O	, S)		Reduced Vertic				and weltand hydro				
	Gleyed Matrix (S4)	•	Piedmont Flood	plain Soils	(F19) (M I	_RA 14	19A) present, unless dis				
	Redox (S5)		Anomalous Brigh)	problematic				
	d Matrix (S6)		(MLRA 149A, 1	53C, 153D)						
Dark Su	ırface (S7) (LRR P, S	S, T, U)									
Restrictive	Layer (if observed)):									
Туре:											
Depth (inch	es):			Hydric soi	il present	t?	Yes X	No			
Danaanlaa											
Remarks:											

Project/Site	Moro Creek Mitig	ation Bank	City/	County:	Bunn	Sampling	Sampling Date: 2018/10/	
Applicant/Owner:	Arkansas Dep	Arkansas Department of Transportation			AR	Sampling	Point:	Plot 66
Investigator(s):	Kayti Ew	ring, Joe Led	lvina	Section, 7	Township, Ran	nge:	T8S R1	4W S24
Landform (hillslope	, terrace, etc.):	n	one	Local relief	(concave, cor	nvex, none):		none
Slope (%): 0	Lat:			Long:		Datum:		WGS84
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Classif	fication:	P	FO1A
Are climatic/hydrolo	ogic conditions of th	e site typical	for this time of	of the year? Yes	X No	(If no	, explain in	ı remarks)
Are vegetation	, soil	, or hydrolo	ogysigi	nificantly disturbe	d? Are	"normal circui	mstances"	present?
Are vegetation	, soil	, or hydrolo	ogynat	urally problemation		Yes X		
							-	wers in Remarks.)
SUMMARY OF FI			owing samp	oling point loca	tions, transe	cts, importa	nt feature	es, etc.
Hydrophytic vegeta	*	Yes X	No					
Hydric soil present?		Yes X	_ No	Is the sampled				
Wetland hydrology	present?	Yes X	No	within a wetlar	1d? \	Yes X	No	
Remarks: (Explain			·					
HYDROLOGY								
Wetland Hydrolog	· -				Secor	ndary Indicato	rs (minimu	ım of two required)
Primary Indicators ((minimum of one is	required; che	ck all that app	ply)		Surface Soil C		
Surface Water (•		_Aquatic Faur					cave Surface (B8)
High Water Tabl	le (A2)		_	its (B15) (LRR U)		Drainage Patte		
Saturation (A3)			_Hydrogen Su	ulfide Odor (C1)		Moss Trim Lin	es (B16)	
Water Marks (B				izospheres on Livi	···9	Dry-Season W		(C2)
Sediment Depos			Roots (C3)			Crayfish Burro		
Drift Deposits (B	-		Presence of	Reduced Iron (C4		•		ial Imagery (C9)
Algal Mat or Cru	` '			Reduction in Tilled		Geomorphic P	•)
Iron Deposits (B	•		Soils (C6)			Shallow Aquita		
	le on Aerial Imagery	(B7)	Thin Muck S			FAC-Neutral T	` '	DD T 10
Water-Stained L	.eaves (B9)		Other (Expla	ain in Remarks)		Sphagnum mo	oss (D8) (Li	RR T, U)
Field Observations	s:							
Surface water prese	ent? Yes _	No	X Depth	(inches)		Wetland hy	drology p	resent?
Water table present	t? Yes _	No	X Depth	· · · · · · · · · · · · · · · · · · ·				
Saturation present?	? Yes _	No	X Depth	(inches)	Ye	es X	No	
(includes capillary f	ringe)							
Describe recorded	data (stream gauge	, monitoring v	well, aerial ph	notos, previous ins	spections), if a	ıvailable:		
Remarks:								

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 66 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species 20% of total cover: **FACW** species 130 50% of total cover: x 2 =260 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species **2** x 3 = 1 Quercus nigra FACU species FAC x 4 = 2 UPL species x 5 = 0 3 Column totals **134** (A) **268** (B) Prevalence Index = B/A = 2.00 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation **X** 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0 and at least 80% = Total Cover X of total cover has indicator status* 50% of total cover: 0.5 20% of total cover: 0.2 4 - Morphogical adaptations* (provide Herb Stratum (Plot size: supporting data in Remarks or on a separate sheet) 1 Panicum verrucosum **FACW** Problematic hydrophytic vegetation* **FACW** Boehmeria cylindrica (explain) 25 3 Mikania scandens **FACW** Persicaria hydropiperoides OBL *Indicators 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) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall Herb - All herbaceous (non-woody) plants, = Total Cover 132 regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: **26.4** Woody Vine Stratum (Plot size: 15-m radius) Smilax rotundifolia **FAC** Woody Vine – All woody vines greater than 3.28 ft in height. 2 3 4 5 Hydrophytic = Total Cover vegetation Yes X No 0.5 20% of total cover: 0.2 present? 50% of total cover: Remarks: (Include photo numbers here or on a separate sheet)

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r conf	irm the absence of ind	icators.)				
Depth	Matrix		Redo	x Feature	3							
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks				
0 - 3	10YR 5/1	83	10YR 5/8	15	С	M	silty clay loam					
			7.5YR 4/4	2	С	M						
3 - 12	10YR 5/2	75	10YR 5/6	20	С	М	silty clay loam					
			10YR 5/8	3	С	М						
			7.5YR 4/4	2	С	M						
¹ Type: C = 0	Concentration, D = D	epletion, RM	I = Reduced Matrix, N	MS = Masł	ed Sand	Grains	s. ² Location: PL = Po	ore Lining, M = Matrix				
Hydric Soil	Indicators:		Polyvalue Below	Surface (S8)		Indicators for Problem	-				
Histisol	` '	-	(LRR S, T, U)				1 cm Muck (A10) (L	·				
	pipedon (A2)	-	Thin Dark Surfac			-	2 cm Muck (A10) (L	RR S)				
	istic (A3)	-	Loamy Mucky Mi		(LRR O)		Reduced Vertic (F1	•				
	en Sulfide (A4)	-	Loamy Gleyed M				(outside MLRA 15	0A, B)				
	d Layers (A5)	· - · · ·	Depleted Matrix				Piedmont Floodplai	n Soils (F19)				
	Bodies (A6) (LRR F ucky Mineral (A7) (L l	-	Redox Dark Surf Depleted Dark S		`		(LRR P, S, T)					
	resence (A8) (LRR U	· · · · · · · ·	X Redox Depression	•	,		Anomalous Bright L (MLRA 153B)	oamy Soils (F20)				
	uck (A9) (LRR P. T)	<u>-</u>	Marl (F10) (LRR	` '			Red Parent Materia	l (TF12)				
	d Below Dark Surfac	e (A11)	Depleted Ochric	•	RA 151)		Very Shallow Dark					
	ark Surface (A12)		Iron-Manganese		-		Other (explain in re	•				
	rairie Redox (A16)		(LRR O, P, T)	iviasses (i	12)			,				
(MLRA		-	Umbric Surface ((F13) (LRF	R P, T, U)							
Sandy N	Mucky Mineral (S1)	-	Delta Ochric (F1				2					
(LRR O		-	Reduced Vertic ((F18) (MLF	RA 150A,	150E		³ Indicators of hydrophytic vegetation and weltand hydrology must be				
Sandy 0	Gleyed Matrix (S4)	-	Piedmont Floodp	olain Soils	(F19) (M l	-RA 14	A) present, unless disturbed or problematic					
Sandy F	Redox (S5)	_	Anomalous Brigh									
Stripped	l Matrix (S6)	-	(MLRA 149A, 15	53C, 153D)							
Dark Su	rface (S7) (LRR P,	S, T, U)										
Restrictive	Layer (if observed)):										
Туре:	, , , , , , , , , , , , , , , , , , , ,											
Depth (inche	es):			Hydric soi	l present	t?	Yes X	No				
							<u></u> -					
Remarks:												

Project/Site	Moro Creek M	itigation Bar	nk	City/County:	Bunn	Sa	ampling Date:	2018/10/08			
Applicant/Owner:	Arkansas	Department	of Transp	ortation State:	AR	Sa	ampling Point:	Plot 67			
Investigator(s):	Kayti	Ewing, Joe	Ledvina	Sec	tion, Township	, Range:	T8S	R14W S24			
Landform (hillslope	, terrace, etc.):		none	Loca	I relief (concave	e, convex, n	ione):	none			
Slope (%): 0	Lat:			Long:		D:	atum:	WGS84			
Soil Map Unit Name	e	Wehad	kee silt lo	am	NWI C	lassification	n:	PFO1A			
Are climatic/hydrolo	ogic conditions o	of the site typi	ical for this	time of the year?	Yes X No		(If no, expla	in in remarks)			
Are vegetation	, soil	, or hyd	drology	significantly di	sturbed?	Are "norm	al circumstand	ces" present?			
Are vegetation	, soil	, or hyd	drology	naturally probl	ematic?	Ye	sX	No			
						(If needed	, explain any a	answers in Remarks.)			
SUMMARY OF FI		ich site map	showing	g sampling poin	t locations, tr	ansects, ir	mportant fea	tures, etc.			
Hydrophytic vegeta	•		X No								
Hydric soil present		Yes	X No		mpled area						
Wetland hydrology	present?	Yes	X No	within a	wetland?	Yes_	X	No			
Remarks: (Explain	alternative proc	edures here o	or in a sep	arate report.)							
HYDROLOGY											
Wetland Hydrolog	y Indicators:				;	Secondary I	ndicators (mir	nimum of two required)			
Primary Indicators	(minimum of one	e is required;	check all t	that apply)		Surfac	face Soil Cracks (B6)				
Surface Water (A1)		Aquatic Fauna (B13)			Sparsely Vegetated Concave Surface (B8)					
High Water Tab	le (A2)		Marl	Deposits (B15) (L	RR U)	Draina	ige Patterns (B	10)			
Saturation (A3)			Hydro	ogen Sulfide Odor ((C1)	Moss	Trim Lines (B1	6)			
Water Marks (B	1)		Oxidi	zed Rhizospheres	on Livina	Dry-Se	eason Water Ta	able (C2)			
Sediment Depos	sits (B2)		Roots (C3)			Crayfish Burrows (C8)					
Drift Deposits (E	33)		Presence of Reduced Iron (C4)			Saturation Visible on Aerial Imagery (C9)					
Algal Mat or Cru	ıst (B4)		Recent Iron Reduction in Tilled			X Geomorphic Position (D2)					
Iron Deposits (B	5)		Soils (C6)			Shallow Aquitard (D3)					
Inundation Visib	ole on Aerial Imag	gery (B7)	Thin Muck Surface (C7)			X FAC-Neutral Test (D5)					
Water-Stained L	eaves (B9)		Othe	r (Explain in Remar	ks)	Sphagnum moss (D8) (LRR T, U)					
Field Observation	e.										
Surface water pres		1	No X	Depth (inches)		Wetl	and hydrolog	ıv present?			
Water table presen				Depth (inches)		1100	uay u 0.0 g	, y p. 000			
Saturation present				Depth (inches)		Yes	X N	lo			
(includes capillary f						_					
Describe recorded	<u> </u>	uge. monitori	ing well, a	erial photos, previ	ous inspections	s), if availab	le:				
	, 3	3 ,	J ,	, ,,	,	,					
Remarks:											
ĺ											

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 67 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) 1 None that are OBL, FACW, or FAC: 2 **Total Number of Dominant** 3 (B) Species Across all Strata: Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B) **Prevalence Index Worksheet** Total % Cover of: **15** x 1 = = Total Cover OBL species 20% of total cover: **FACW** species **115** x 2 = 50% of total cover: 230 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species **2** x 3 = 1 Ilex opaca FACU species FAC x 4 = 2 UPL species x 5 = 0 3 Column totals **132** (A) **251** (B) Prevalence Index = B/A = 1.90 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation **X** 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0 and at least 80% = Total Cover X of total cover has indicator status* 50% of total cover: 20% of total cover: 0.4 4 - Morphogical adaptations* (provide Herb Stratum (Plot size: supporting data in Remarks or on a separate sheet) 1 Panicum verrucosum **FACW** Problematic hydrophytic vegetation* 30 **FACW** 2 Bidens aristosa (explain) 25 3 Solidago gigantea **FACW** Persicaria punctata 15 OBL *Indicators of hydric soil and wetland hydrology must be Boehmeria cylindrica **FACW** present, unless disturbed or problematic **Definitions of Four Vegetation Strata:** 6 7 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall = Total Cover Herb - All herbaceous (non-woody) plants, 130 regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: Woody Vine Stratum (Plot size: 15-m radius) None Woody Vine – All woody vines greater than 3.28 ft 1 in height. 2 5 Hydrophytic = Total Cover vegetation Yes X No 20% of total cover: present? 50% of total cover: Remarks: (Include photo numbers here or on a separate sheet)

Profile Des	cription: (Describe	to the dept				r confi	rm the al	osence of i	indicators.)	
Depth	Matrix		-	lox Feature			_			
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		exture	Remarks	
0 - 4	10YR 3/2	98	10YR 5/8	2	С	M	silty	clay loam		
4 - 10	10YR 3/2	78	10YR 5/6	2	С	M	silty	clay loam		
	10YR 4/2	20								
10 - 12	10YR 4/2	88	10YR 5/6	2	С	M	silty	clay loam		
	10YR 5/1	10								
¹ Type: C = 0	Concentration, D = D	Depletion, RM	1 = Reduced Matrix,	MS = Mas	ked Sand	Grains.	. ² Loc	cation: PL =	= Pore Lining, M = Matrix	
	Indicators:		Polyvalue Belov						olematic Hydric Soils ³ :	
Histisol			(LRR S, T, U)	N Surface (30)		1 cm Muck (A10) (LRR O)			
	pipedon (A2)	•	Thin Dark Surfa	ace (S9) (Li	RR S, T, I	U) _		Muck (A10		
_	listic (A3)	•	 Loamy Mucky N			-		ced Vertic		
	en Sulfide (A4)	Loamy Gleyed					ide MLRA	•		
— · ·	d Layers (A5)	X Depleted Matrix	. ,		-			plain Soils (F19)		
	Bodies (A6) (LRR F	 Redox Dark Su	` '				P, S, T)	piairi dolis (i 19)		
	ucky Mineral (A7) (L	Depleted Dark	` '	')	_		-	ht Loamy Soils (F20)		
	resence (A8) (LRR I	· ·	Redox Depress	•	,		(MLF	The Eddiny Colla (1 20)		
	uck (A9) (LRR P. T)	 Marl (F10) (LRI			_	— · Red l	Parent Mat	erial (TF12)		
 Deplete	c (F11) (ML	.RA 151)	-			ark Surface (TF12)				
Thick D	e Masses (-	-		r (explain ir	• •				
	Prairie Redox (A16)		(LRR O, P, T)	c Masses (1 12)	-		` '	,	
(MLRA	, ,	•	Umbric Surface	(F13) (LRI	R P, T, U)				
	Mucky Mineral (S1)	•	Delta Ochric (F							
(LRR O		•	Reduced Vertic		-	, 150E		³ Indicators of hydrophytic vegetation and weltand hydrology must be (3A) present, unless disturbed or		
	Gleyed Matrix (S4)	•					and v 9 A) prese			
	Redox (S5)	•	—— Anomalous Briç					ematic	disturbed of	
	d Matrix (S6)		(MLRA 149A, 1			,,	•			
	urface (S7) (LRR P,	S, T, U)	`	·	•					
									_	
	Layer (if observed):								
				l				v		
Depth (inch	es):			Hydric so	il presen	t?	Yes_	<u> </u>	No	
Remarks:										
		Fe and	Mn concretions. L	ayers cont	aining th	em not	recorde	d.		

Project/Site	oject/Site Moro Creek Mitigation Bank C			City/	County: Bunn S		S	Sampling Date: 2018/10/08		2018/10/08		
Applicant/Owner:	Arkansa	s Departme	nt of T	ransportatio	n State:	AR	Sa	ampling Po	oint:	Plot 68		
Investigator(s):	Ka	yti Ewing, J	oe Led	dvina	Section,	Township,	Range:		T8S R14W	S24		
Landform (hillslope,	, terrace, etc.	.):	n	none	Local relie	f (concave,	convex, r	10ne):	n	one		
Slope (%): 0	Lat:				Long:		D	atum:	WC	GS84		
Soil Map Unit Name	e	Weh	ıadkee	silt loam		NWI Cla	assification	າ:	PFO	1A		
Are climatic/hydrolo	gic condition	s of the site	typical	for this time of	of the year? Yes	X No		(If no, ex	xplain in rei	marks)		
Are vegetation	, soil	, or	hydrolo	ogysig	nificantly disturb	ed?	Are "norm	al circums	tances" pre	esent?		
Are vegetation	, soil	, or	hydrolo	ogynat	urally problemat	ic?	Ye	es X	No			
								•	•	s in Remarks.)		
SUMMARY OF FI				nowing samp	oling point loca	ations, tra	nsects, i	mportant	features,	etc.		
Hydrophytic vegeta	-	-	<u> X</u>	No								
Hydric soil present?		Yes	<u> X</u>	No	Is the sampled area							
Wetland hydrology	present?	Yes	Х	No	within a wetla	ınd?	Yes_	<u> </u>	No			
Remarks: (Explain a	aiternative pr	ocedures ne	re or in	i a separate re	ероп.)							
HYDROLOGY												
Wetland Hydrolog	y Indicators	:				Se	econdary l	Indicators ((minimum a	of two required)		
Primary Indicators ((minimum of	eck all that ap	ply)	_	Surfac	ce Soil Crac	cks (B6)					
Surface Water (A	A1)			Aquatic Fauna (B13)			Sparsely Vegetated Concave Surface (B8)					
X High Water Table (A2)				Marl Depos	its (B15) (LRR U	J)	 Draina	age Patterns	s (B10)			
X Saturation (A3)				Hydrogen Sı	ulfide Odor (C1)	_	Moss	Trim Lines	(B16)			
Water Marks (B1)				Oxidized Rh	izospheres on Liv	ina -	Dry-Se	eason Wate	er Table (C2	2)		
Sediment Depos	sits (B2)			Roots (C3)			Crayfi:	sh Burrows	(C8)			
Drift Deposits (B	33)			Presence of Reduced Iron (C4)			Satura	ation Visible	on Aerial I	magery (C9)		
Algal Mat or Cru	ıst (B4)			Recent Iron Reduction in Tilled			X Geomorphic Position (D2)					
Iron Deposits (B	5)		_	Soils (C6)		_	Shallow Aquitard (D3)					
Inundation Visib	le on Aerial In	nagery (B7)		Thin Muck S	Surface (C7)	_	X FAC-N	AC-Neutral Test (D5)				
Water-Stained L	.eaves (B9)			Other (Expla	in in Remarks)		Sphagnum moss (D8) (LRR T, U)					
Field Observations	 s:			_								
Surface water prese		es	No	X Depth	(inches)		Wetl	and hydro	ology pres	ent?		
Water table present		es X	No		(inches)	=		,	0, 1			
Saturation present?		es X	No		(inches)	-	Yes	X	No			
(includes capillary f				<u> </u>	` /	-	_					
Describe recorded		gauge, mon	itorina '	well. aerial ph	notos, previous ir	nspections).	if availab	le:				
		<i></i>	<u> </u>	, ,	, i	, ,,						
Remarks:												
				wa	ater in hole							

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	
				Number of Dominant Species
1 Liquidambar styraciflua	3	N	FAC	that are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across all Strata: (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 100.00% (A/B)
6				(12)
7				Prevalence Index Worksheet
8				Total % Cover of:
	3	Total Cove	er	OBL species <u>10</u> x 1 = <u>10</u>
50% of total cover: 1	. 5 20% c	of total cover	r: 0.6	FACW species 79 x 2 = 158
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 44 x 3 = 132
1 Diospyros virginiana	1	N	FAC	FACU species 0 x 4 = 0
2 Quercus phellos	1	N	FACW	UPL species 0 x 5 = 0
			TACT	
3				Column totals 133 (A) 300 (B)
4				Prevalence Index = B/A = 2.26
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				3 - Prevalence index is ≤3.0 and at least 80%
	2	Total Cove		
500/ -ft-t-l				X of total cover has indicator status*
50% of total cover:	20% 0	of total cover	r: 0.4	4 - Morphogical adaptations* (provide
Herb Stratum (Plot size: 1m ²)			supporting data in Remarks or on a
1 Coleataenia rigidula	70	Υ	FACW	separate sheet)
2 Rhynchospora corniculata	10	N	OBL	Problematic hydrophytic vegetation*
3 Boehmeria cylindrica	4	N	FACW	(explain)
4 Commelina diffusa	2		FACW	
			TACV	*Indicators of hydric soil and wetland hydrology must be
5				present, unless disturbed or problematic
6				Definitions of Four Vegetation Strata:
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8				or more in diameter at breast height (DBH),
9				regardless of height.
10		•		Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
				equal to 3.28 ft (1 m) tall
12				, ,
		Total Cove		Herb – All herbaceous (non-woody) plants,
50% of total cover: 4	3 20% c	of total cover	r: 17.2	regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius)			ft tall
1 Vitis rotundifolia	35	Υ	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Smilax rotundifolia			FAC	in height.
3 Brunnichia ovata			FACW	5
· .		14	IACW	
4				
5				
5 6				Hydrophytic
· 		Total Cove		Hydrophytic vegetation
6	42			vegetation
· 	42	Total Cove		
6 50% of total cover: 2	42 = 1 20% c			vegetation
6 50% of total cover: 2	42 = 1 20% c			vegetation
6	42 = 1 20% c			vegetation
6 50% of total cover: 2	42 = 1 20% c			vegetation
6 50% of total cover: 2	42 = 1 20% c			vegetation
6 50% of total cover: 2	42 = 1 20% c			vegetation
6 50% of total cover: 2	42 = 1 20% c			vegetation

Sampling Point: Plot 68

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r confi	irm the absence of ind	icators.)				
Depth	Matrix		Redo	ox Feature	S							
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks				
0 - 1	10YR 4/2	98	10YR 4/6	2	С	M	silty clay loam					
1 - 6	10YR 5/1	90	10YR 5/6	10	С	M	silty clay loam					
6 - 12	10YR 5/1	80	10YR 5/6	10	С	М	silty clay					
			10YR 6/8	10	С	М						
¹ Type: C = 0	Concentration, D = D	epletion, RM	I = Reduced Matrix, I	MS = Masł	ced Sand	Grains	s. ² Location: PL = Po	ore Lining, M = Matrix				
1 -	Indicators:		Polyvalue Below	Surface (S8)		Indicators for Problem	-				
Histisol	•	-	(LRR S, T, U)			•	1 cm Muck (A10) (I	•				
_	pipedon (A2)	-	Thin Dark Surface				2 cm Muck (A10) (I	_RR S)				
	istic (A3)	-	Loamy Mucky M		(LRR O)		Reduced Vertic (F1	,				
─ ' '	en Sulfide (A4)	-	Loamy Gleyed M			•	(outside MLRA 15	0A, B)				
	d Layers (A5)		Depleted Matrix	` '			Piedmont Floodpla	in Soils (F19)				
	: Bodies (A6) (LRR P ucky Mineral (A7) (L l	-	Redox Dark Surf Depleted Dark S		`		 `	_(LRR P, S, T)				
	resence (A8) (LRR L		X Redox Depression	•	,		Anomalous Bright I (MLRA 153B)	oamy Soils (F20)				
	uck (A9) (LRR P. T)	·,	Marl (F10) (LRR	, ,		i	Red Parent Materia	al (TF12)				
_	d Below Dark Surfac	e (A11)	Depleted Ochric	•	RA 151)	,	Very Shallow Dark					
	ark Surface (A12)	_	' Iron-Manganese		-	i	Other (explain in re					
	rairie Redox (A16)		(LRR O, P, T)	ividoses (i	12)	•		,				
(MLRA		-	Umbric Surface ((F13) (LRF	R P, T, U)							
Sandv I	Mucky Mineral (S1)	-	Delta Ochric (F1	7) (MLRA	151)		2					
(LRR [°] O		-	Reduced Vertic (³ Indicators of hydro and weltand hydrol	nav must he				
Sandy (Gleyed Matrix (S4)	-	Piedmont Floodp	olain Soils	(F19) (M L	-RA 14	19A) present, unless dis	turbed or				
Sandy F	Redox (S5)		Anomalous Brigh				problematic					
	d Matrix (S6)	-	(MLRA 149A, 15	53C, 153D)							
Dark Su	ırface (S7) (LRR P, S	S, T, U)										
Restrictive	Layer (if observed)	:										
Туре:												
Depth (inch	es):			Hydric soi	l present	t?	Yes X	No				
Remarks:			_									
Remarks.												

Project/Site	Moro Creek Mit	igation Bank	. Cif	ty/County:	Bunn	S	ampling Da	te: 20	18/10/08	
Applicant/Owner:		_					ampling Poi		Plot 69	
Investigator(s):		Ewing, Joe Le			n, Township, Ra	ange:	Т	78S R14W S	§24	
Landform (hillslope	, terrace, etc.):		none	Local re	lief (concave, c	onvex, r	ione):	no	ne	
Slope (%): 0	Lat:			Long:		D	atum:	WGS	384	
Soil Map Unit Name	e	Wehadke	ee silt loam		NWI Class	sification	1:	PFO1/	A	
Are climatic/hydrolo	ogic conditions of	the site typica	al for this time	e of the year? Ye	es <u>X</u> No		(If no, ex	plain in rem	arks)	
Are vegetation	, soil	, or hydro	ologys	ignificantly distu	rbed? Ar	e "norm	al circumsta	ances" pres	ent?	
Are vegetation	, soil	, or hydro	ologyn	aturally problem	atic?	Ye	s <u>X</u>	No		
					•			•	in Remarks.)	
SUMMARY OF FI		h site map s	showing sar	mpling point lo	cations, trans	sects, ir	nportant f	eatures, et	t c .	
Hydrophytic vegeta	-	Yes X								
Hydric soil present?		Yes X		Is the samp						
Wetland hydrology	present?	Yes X	No	within a we	tland?	Yes_	<u> </u>	No		
HYDROLOGY										
Wetland Hydrolog					Sec	•	•		two required)	
Primary Indicators	(minimum of one	is required; ch	neck all that a	apply)			e Soil Crack			
Surface Water (•	_		auna (B13)					Surface (B8)	
	High Water Table (A2)			osits (B15) (LRR		_	age Patterns			
Saturation (A3)			Hydrogen	Sulfide Odor (C1		Moss	Trim Lines (B16)		
Water Marks (B			Oxidized F	Rhizospheres on	Living	_		r Table (C2)		
Sediment Depos		_	Roots (C3)			Crayfish Burrows (C8)				
Drift Deposits (E	•	_	Presence of Reduced Iron (C4)			Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Cru				on Reduction in Ti	lled X					
Iron Deposits (B	•		Soils (C6)			Shallow Aquitard (D3)				
	le on Aerial Image	ry (B7)		Surface (C7)		X FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)				
Water-Stained L	.eaves (B9)		Other (Exp	plain in Remarks)		Spnag	num moss ((D8) (LRR 1 ,	, U)	
Field Observation	s:									
Surface water pres	ent? Yes	No	X Dept	th (inches)		Wetl	and hydro	logy presei	nt?	
Water table presen	t? Yes	No	X Dept	th (inches)						
Saturation present?	•	No	X Dept	th (inches)	_ '	Yes _	X	No		
(includes capillary f										
Describe recorded	data (stream gau	ge, monitoring	ا well, aerial	photos, previous	inspections), if	availab	le:			
Remarks:										

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 69 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **10** x 1 = 10 20% of total cover: **FACW** species 50% of total cover: x 2 =196 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species **5** x 3 = 15 **FACU** species 0 1 Quercus phellos **FACW** x 4 =**FAC** UPL species 2 Pinus taeda x 5 = 0 Column totals Quercus pagoda 1 Ν **FACW 113** (A) **221** (B) Carpinus caroliniana 1 Ν **FAC** Prevalence Index = B/A = 1.96 **Hydrophytic Vegetation Indicators:** Carya sp. 1 - Rapid test for hydrophytic vegetation **X** 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0 and at least 80% = Total Cover X of total cover has indicator status* 50% of total cover: 20% of total cover: 1.2 4 - Morphogical adaptations* (provide Herb Stratum (Plot size: supporting data in Remarks or on a separate sheet) 1 Bidens aristosa **FACW** Problematic hydrophytic vegetation* 10 **OBL** Persicaria punctata (explain) 3 *Indicators 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) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall = Total Cover Herb - All herbaceous (non-woody) plants, 105 regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: 21 ft tall (Plot size: 15-m radius) Woody Vine Stratum Smilax rotundifolia Woody Vine – All woody vines greater than 3.28 ft **FAC** Vitis rotundifolia **FAC** 3 4 5 Hydrophytic 3 = Total Cover vegetation Yes X No____ 20% of total cover: 0.6 present? 50% of total cover: 1.5 Remarks: (Include photo numbers here or on a separate sheet)

Depth	Matrix		Rec	dox Feature	s			
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 2	10YR 5/2	90	10YR 5/6	10	С	М	silty clay loam	
2 - 12	10YR 6/2	98	10YR 6/6	2	С	М	sandy clay	
							M 🕶	
¹ Type: C =	Concentration, D = [Depletion RN	/ = Reduced Matrix	MS = Mas	ked Sand	Grains	² l ocation: PL = Po	re Lining, M = Matrix
	I Indicators:	opiotion, ra	<u> </u>				Indicators for Problem	_
Histiso			Polyvalue Belov (LRR S, T, U)	w Surrace (58)		1 cm Muck (A10) (L	-
	Epipedon (A2)		Thin Dark Surfa	ace (S9) (L l	RR S. T.	U) .	2 cm Muck (A10) (L	•
	Histic (A3)		Loamy Mucky N					-
	en Sulfide (A4)		Loamy Gleyed	-		,	Reduced Vertic (F18 (outside MLRA 150	•
· ·	ed Layers (A5)	X Depleted Matrix	, ,		•	 `	•	
	c Bodies (A6) (LRR I	P. T. U)	Redox Dark Su	` '			Piedmont Floodplair (LRR P, S, T)	1 30118 (F 19)
	lucky Mineral (A7) (L	Depleted Dark	, ,	7)	-		namy Saila (E20)	
	Presence (A8) (LRR		X Redox Depress	,	,		Anomalous Bright Lo (MLRA 153B)	Damy Soils (F20)
	1 cm Muck (A9) (LRR P. T) Marl (F10) (L					-	Red Parent Material	(TF12)
Depleted Below Dark Surface (A11) Depleted Och				RA 151)	-	—– Very Shallow Dark S	` '	
Thirty Deals Courfees (A40)					•	Other (explain in ren		
	Prairie Redox (A16)		Iron-Manganes (LRR O, P, T)	e Masses (r 12)	•		,
(MLRA	, ,		Umbric Surface	e (F13) (LR	R P, T, U)		
— ` Sandv	Mucky Mineral (S1)		Delta Ochric (F			,		
(LRR C			Reduced Vertic			, 150E	³ Indicators of hydrop	
	Gleyed Matrix (S4)		Piedmont Flood	dplain Soils	(F19) (M	LRA 14	and weltand hydrolo 9A) present, unless distu	
	Redox (S5)		—— Anomalous Brig	•			problematic	arbed of
	d Matrix (S6)		(MLRA 149A, 1			,,	·	
	urface (S7) (LRR P,	S, T, U)	<u> </u>		•			
				1				
	Layer (if observed):						
Type:				l			v. v	
Depth (incr	nes):			Hydric so	ıı presen	t?	Yes X	No
Remarks:								

Project/Site	Moro Creek Mitig	jation Bank	Cit	ty/County:	Bunn	Sampling	g Date:	2018/10/08			
Applicant/Owner:	Arkansas Dej	partment of	- Γransportat	t ion State:	AR	Sampling	و Point:	Plot 70			
Investigator(s):	Kayti Ev	wing, Joe Led	dvina	Section	n, Township, I	Range:	T8S R	14W S24			
Landform (hillslope,	, terrace, etc.):		none	Local re	lief (concave,	convex, none):_		none			
Slope (%): 0	Lat:			Long:		Datum:		WGS84			
Soil Map Unit Name	<u> </u>	Wehadkee	silt loam		NWI Cla	ssification:		PFO1A			
Are climatic/hydrolo	gic conditions of the	ne site typical	for this time	of the year? Ye	s X No	(If no	ວ, explain	in remarks)			
Are vegetation				ignificantly distu		Are "normal circu		s" present?			
Are vegetation	, soil	, or hydrol	ogyn	aturally problem		Yes X					
			_					swers in Remarks.)			
SUMMARY OF FI				npling point to	cations, trar	nsects, importa	ant featu	res, etc.			
Hydrophytic vegeta	•	Yes X	No	_							
Hydric soil present?		Yes X	_ No	Is the samp							
Wetland hydrology	present?	Yes X	No	within a wet	iland?	Yes X	N	o			
HYDROLOGY											
Wetland Hydrolog	_				Se	condary Indicate	ors (minim	num of two required)			
Primary Indicators (minimum of one is	required; che	eck all that a	apply)	_	Surface Soil (Cracks (B6	5)			
Surface Water (A	A1)	_		auna (B13)	_	Sparsely Veg	etated Co	ncave Surface (B8)			
High Water Tabl	High Water Table (A2)			osits (B15) (LRR	U) _	Drainage Pat	terns (B10)			
Saturation (A3)			Hydrogen	Sulfide Odor (C1	_	Moss Trim Lir	nes (B16)				
Water Marks (B1	1)		Oxidized F	Rhizospheres on I	Living _	Dry-Season V	Nater Tabl	e (C2)			
Sediment Depos	sits (B2)	_	Roots (C3		_	Crayfish Burn					
X Drift Deposits (B	.3)	_	Presence of Reduced Iron (C4)					erial Imagery (C9)			
Algal Mat or Cru			Recent Iron Reduction in Tilled			X Geomorphic Position (D2)					
Iron Deposits (B	·	_	Soils (C6)		_	Shallow Aquitard (D3)					
	le on Aerial Imagery	/ (B7)	_	Surface (C7)	_	X FAC-Neutral Test (D5)					
X Water-Stained L	eaves (B9)		Other (Exp	plain in Remarks)		Sphagnum moss (D8) (LRR T, U)					
Field Observations	s:										
Surface water prese	ent? Yes _	No	X Depf	th (inches)		Wetland hy	ydrology	present?			
Water table present	t? Yes	No	X Dept	th (inches)	_						
Saturation present?	Yes _	No	X Dept	th (inches)	_	Yes X	No				
(includes capillary fi	ringe)										
Describe recorded of	data (stream gaug	e, monitoring	well, aerial	photos, previous	inspections),	if available:					
Remarks:											

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	
1 Liquidambar styraciflua	50	Y	FAC	Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)
2 Pinus taeda	15		FAC	
3 Quercus pagoda	10		FACW	Total Number of Dominant Species Across all Strata: 5 (B)
4 Quercus nigra	5	N	FAC	``
	1	N	FAC	Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)
			FAC	that are OBL, FACW, or FAC. 100.00% (A/B)
6				Dunyalamaa luulay Maulahaat
				Prevalence Index Worksheet
8				Total % Cover of:
500/ 51 1 1		Total Cove		OBL species
	20% c	of total cover	16.2	FACW species 11 x 2 = 22
Sapling/Shrub Stratun (Plot size: 15-m radius)			FAC species 109 x 3 = 327
1 Ilex opaca	10	Y	FAC	FACU species x 4 = 0
2 Carpinus caroliniana	10	Y	FAC	UPL species x 5 =0
3 Quercus nigra	1	<u>N</u>	FAC	Column totals <u>120</u> (A) <u>349</u> (B)
4 Acer rubrum	1	<u>N</u>	FAC	Prevalence Index = B/A = 2.91
5 Quercus pagoda	1	N	FACW	Hydrophytic Vegetation Indicators:
6 Diospyros virginiana	1	N	FAC	1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				3 - Prevalence index is ≤3.0 and at least 80%
	24	Total Cove	r	X of total cover has indicator status*
50% of total cover: 1	2 20% c	of total cover	4.8	4 - Morphogical adaptations* (provide
Herb Stratum (Plot size: 1m ²)			supporting data in Remarks or on a
1 None	•			separate sheet)
2				Problematic hydrophytic vegetation*
3				(explain)
4				 ` ' '
				*Indicators of hydric soil and wetland hydrology must be
5				present, unless disturbed or problematic Definitions of Four Vegetation Strata:
6				
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),
8				regardless of height.
9				
10				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or
11				equal to 3.28 ft (1 m) tall
12				. , ,
		Total Cove		Herb – All herbaceous (non-woody) plants,
50% of total cover:	20% c	of total cover	<u> </u>	regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius)			ft tall
1 Vitis rotundifolia	10	<u> </u>	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Berchemia scandens	5	Υ	FAC	in height.
3				
4				
5				
6				Hydrophytic
	15 :	Total Cove		vegetation
50% of total cover: 7	. 5 20% c	of total cover	: 3	present? Yes X No
				· · · · · · · · · · · · · · · · · · ·
Remarks: (Include photo numbers here or on a separ	ate sheet)			
ternants. (morade prioto numbers here or on a separ	ate sheet)			

Sampling Point: Plot 70

Profile Des	cription: (Describe	to the dept	n needed to docume	ent the inc	licator o	r confi	irm the absence of indi	cators.)			
Depth	Matrix		Redo	x Features	3						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 6	10YR 4/2	98	10YR 5/6	2	С	PL	silty clay loam				
6 - 12	10YR 5/2	90	10YR 4/6	5	С	M	silty clay loam				
			10YR 5/6	5	С	М					
							Pi ▼				
¹ Type: C =	Concentration, D = D	epletion, RM	= Reduced Matrix, N	/IS = Mask	ed Sand	Grains	s. ² Location: PL = Po	ore Lining, M = Matrix			
Hydric Soil	Indicators:		Polyvalue Below	Surface (S	88)		Indicators for Problem	•			
Histisol	• •	-	(LRR S, T, U)				1 cm Muck (A10) (L	•			
	pipedon (A2)	-	Thin Dark Surfac				2 cm Muck (A10) (L	RR S)			
	listic (A3)	-	Loamy Mucky M	-	(LRR O))	Reduced Vertic (F1	,			
	en Sulfide (A4)	-	Loamy Gleyed M				(outside MLRA 150	DA, B)			
	ed Layers (A5)		Depleted Matrix	` '			Piedmont Floodplai	n Soils (F19)			
<u> </u>	: Bodies (A6) (LRR F ucky Mineral (A7) (L l	· · · · · -	Redox Dark Surf Depleted Dark S	. ,	١		(LRR P, S, T)				
	resence (A8) (LRR L	-	Redox Depression)		Anomalous Bright L (MLRA 153B)	oamy Soils (F20)			
	uck (A9) (LRR P. T)	Marl (F10) (LRR	. ,			Red Parent Materia	l (TF12)				
	Depleted Below Dark Surface (A11) Depleted Och						Very Shallow Dark	•			
	ark Surface (A12)	•	· Iron-Manganese		-		Other (explain in re	· ·			
Coast F	Prairie Redox (A16)		(LRR O, P, T)	1) 00000111	12)			•			
(MLRA		-	Umbric Surface ((F13) (LRR	R P, T, U))					
Sandy I	Mucky Mineral (S1)	_	Delta Ochric (F1	7) (MLRA	151)		31. 12. 14. 15. 15. 1				
(LRR O), S)	<u>-</u>	Reduced Vertic ((F18) (MLF	RA 150A,	150E	³ Indicators of hydrophytic vegetation and weltand hydrology must be				
	Gleyed Matrix (S4)	-	Piedmont Floodp	olain Soils ((F19) (M I	LRA 14	9A) present, unless disturbed or problematic				
	Redox (S5)		Anomalous Brigh	•	•))					
	d Matrix (S6)		(MLRA 149A, 15	3C, 153D)							
Dark St	urface (S7) (LRR P, S	S, T, U)									
Restrictive	Layer (if observed)):									
Type:											
Depth (inch	es):			Hydric soi	l presen	t?	Yes X	No			
Remarks:			L								
rtemarks.											

Project/Site	Moro Creek Miti	igation Bank	City	y/County:	Bunn	S	ampling Da	te: 2	018/10/08		
	Arkansas De	_					ampling Poi		Plot 71		
Investigator(s):		wing, Joe Le			n, Township, R	ange:	7	78S R14W	S24		
Landform (hillslope,	terrace, etc.):	ı	none	Local re	lief (concave, c	onvex, r	none):	ne	one		
Slope (%): 0	Lat:			Long:		D	atum:	WG	S84		
Soil Map Unit Name)	Wehadkee	e silt loam		NWI Clas	sification	า:	PFO ²	IA		
Are climatic/hydrolo	gic conditions of	the site typical	for this time	of the year? Ye	es <u>X</u> No		(If no, ex	plain in rer	marks)		
Are vegetation	, soil	, or hydrol	ogysi	gnificantly distu	rbed? Ar	re "norm	al circumst	ances" pre	sent?		
Are vegetation	, soil	, or hydrol	ogyna	aturally problem	atic?	Ye	es X	No			
					(If	needed	l, explain ar	ny answers	in Remarks.)		
SUMMARY OF FI	NDINGS - Attac	h site map sl	howing san	npling point lo	cations, trans	sects, i	mportant f	eatures, e	etc.		
Hydrophytic vegeta		Yes X	No	_							
Hydric soil present?		Yes X	No	Is the samp							
Wetland hydrology	present?	Yes X	No	within a we	tland?	Yes_	X	No			
HYDROLOGY											
Wetland Hydrology	=				Sec	-	•		f two required)		
Primary Indicators (minimum of one i	s required; ch	eck all that a	ipply)			ce Soil Cracl				
Surface Water (A	,		Aquatic Fa		_				Surface (B8)		
	High Water Table (A2)			osits (B15) (LRR		_	age Patterns				
Saturation (A3)			Hydrogen S	Sulfide Odor (C1		Moss	Trim Lines (B16)			
Water Marks (B1			Oxidized R	Rhizospheres on	Living	_	eason Wate)		
Sediment Depos			Roots (C3)			_	sh Burrows				
Drift Deposits (B	•		Presence of Reduced Iron (C4)			Saturation Visible on Aerial Imagery (C9)					
Algal Mat or Cru				n Reduction in T							
Iron Deposits (B	•	(5-1)	Soils (C6)			Shallow Aquitard (D3)					
	le on Aerial Image	ry (B7)	_	Surface (C7)		X FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)					
Water-Stained L	eaves (B9)	_	Other (Exp	olain in Remarks)	_	Sphag	num moss ((D8) (LRR	I, U)		
Field Observations	s :										
Surface water prese	ent? Yes	No	X Depti	h (inches)		Wetl	and hydro	logy prese	ent?		
Water table present	? Yes	No	X Depti	h (inches)							
Saturation present?	Yes	No	X Depti	h (inches)	_ '	Yes _	X	No			
(includes capillary fi											
Describe recorded of	ata (stream gauç	ge, monitoring	well, aerial p	ohotos, previous	inspections), if	availab	le:				
Remarks:											

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 71 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** (B) Species Across all Strata: Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **0** x 1 = 20% of total cover: **FACW** species 50% of total cover: 85 x 2 =170 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species **27** x 3 = FACU species 32 1 Ilex opaca **FAC** x 4 = **FAC** Aralia spinosa UPL species x 5 = 0 Carya alba 2 Ν Column totals **120** (A) **283** (B) Symplocos tinctoria 1 **FAC** Prevalence Index = B/A = 2.36 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation X 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0 and at least 80% = Total Cover 20 X of total cover has indicator status* 50% of total cover: 20% of total cover: 4 - Morphogical adaptations* (provide Herb Stratum (Plot size: supporting data in Remarks or on a separate sheet) 1 Panicum verrucosum **FACW** Problematic hydrophytic vegetation* **FACW** 2 Boehmeria cylindrica (explain) **FACU** 3 Perilla frutescens 5 Ν Bidens aristosa 4 Ν **FACW** *Indicators of hydric soil and wetland hydrology must be Eupatorium capillifolium **FACU** present, unless disturbed or problematic **Definitions of Four Vegetation Strata:** Solidago gigantea **FACW** Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. 9 Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall = Total Cover Herb - All herbaceous (non-woody) plants, 93 regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: 18.6 (Plot size: 15-m radius) Woody Vine Stratum Vitis rotundifolia **FAC** Woody Vine – All woody vines greater than 3.28 ft **FAC** Berchemia scandens 3 4 5 Hydrophytic 9 = Total Cover vegetation Yes X No ____ 20% of total cover: 1.8 present? 50% of total cover: 4.5 Remarks: (Include photo numbers here or on a separate sheet)

Depth	Matrix		Red	dox Feature	s					
Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 6	10YR 3/2	88	10YR 3/6	2	С	М	silty clay loam			
	10YR 5/1	10								
6 - 12	10YR 4/2	49	10YR 3/6	2	С	М	silty clay loam			
	10YR 5/2	49								
	1011110/2									
Tuma: C = 1	Canacatratian D = F	Damlatian DM	- Dadward Matrix	MC = Maa	lead Cand	Crains	21 anation, D1 = F	Dave Lining M = Matri		
	Concentration, D = D	Depletion, Rivi						ore Lining, M = Matri		
-	Indicators:		Polyvalue Belo	w Surface (S8)	ı	ndicators for Problematic Hydric Soils ³ :			
Histisol	•	-	(LRR S, T, U)	000 (50) (1)	DD C T I		1 cm Muck (A10) (LRR O)			
	pipedon (A2)	-	Thin Dark Surfa Loamy Mucky I			_		2 cm Muck (A10) (LRR S)		
	istic (A3)	-					Reduced Vertic (F18)			
— ' '	en Sulfide (A4)	-	Loamy Gleyed	, ,		-	(outside MLRA 150A, B)			
	d Layers (A5)		X Depleted Matrix	` '	ain Soils (F19)					
	Bodies (A6) (LRR F	_	Redox Dark Su	, ,	7 \	_		(LRR P, S, T)		
	ucky Mineral (A7) (L	· · · · · · · ·	Depleted Dark	=	′)		Anomalous Bright Loamy Soils (F20) (MLRA 153B)			
	resence (A8) (LRR I	-	Redox Depress	, ,		_	_ `			
	uck (A9) (LRR P. T)	-	Marl (F10) (LR	•	DA 454\	_	Red Parent Material (TF12) Very Shallow Dark Surface (TF12)			
	d Below Dark Surface (A12)	ce (ATT)	Depleted Ochri		-	_	Other (explain in remarks)			
Thick Dark Surface (A12) Iron-Manganes				se Masses (lasses (F12) Other (explain in remarks)					
	Prairie Redox (A16)	-	(LRR O, P, T)	· (E42) (LD						
(MLRA	,	-	Umbric Surface		-					
-	Mucky Mineral (S1)	-	Delta Ochric (F		-	4505	³ Indicators of hydro	³ Indicators of hydrophytic vegetation		
_(LRR O		-	Reduced Vertice				and weltand hydrology must be A) present, unless disturbed or			
	Gleyed Matrix (S4)	-						sturbed or		
	Redox (S5)		Anomalous Bri)	problematic			
	d Matrix (S6)	C T II\	(MLRA 149A, [,]	1530, 1531	')					
		3, I, U)								
	ırface (S7) (LRR P,	, , ,								
Dark Su	Layer (if observed									
Dark Su										
Dark Su):		Hydric so	il presen	t?	Yes X	No		
Dark Su Restrictive Type: Depth (inche	Layer (if observed):		Hydric so	il presen	t?	YesX	No		
Dark Su	Layer (if observed):		Hydric so	il presen	t?	Yes X	No		
Dark Su Restrictive Type: Depth (inche	Layer (if observed):		Hydric so	il presen	1?	Yes <u>X</u>	No		
Dark Su Restrictive Type:	Layer (if observed):		Hydric so	il presen	1?	Yes X	No		
Dark Su estrictive ype: epth (inche	Layer (if observed):		Hydric so	il presen	t? 	Yes X	No		
Dark Su Restrictive Type: Depth (inche	Layer (if observed):		Hydric so	il presen	1?	Yes X	No		
Dark Su Restrictive Type:	Layer (if observed):		Hydric so	il presen	t?	Yes X	No		
Dark Su Restrictive Type: Depth (inche	Layer (if observed):		Hydric so	il presen	1?	Yes X	No		
Dark Su Restrictive Type: Depth (inche	Layer (if observed):		Hydric so	il presen	1?	Yes X	No		
Dark Su Restrictive Type: Depth (inche	Layer (if observed):		Hydric so	il presen	t?	Yes X	No		
Dark Su Restrictive Type: Depth (inche	Layer (if observed):		Hydric so	il presen	1?	Yes X	No		
Dark Su Restrictive Type:	Layer (if observed):		Hydric so	il presen	1?	Yes X	No		

Project/Site	Site Moro Creek Mitigation Bank City		city/County:	Bunn	Sampli	ing Date:	2018/10/09			
Applicant/Owner:	t/Owner: Arkansas Department of Transportation		ation State:	AR	Sampling Point:		Plot 72			
Investigator(s):	Kayti Ew	ving, Joe Le	dvina	Section	n, Township,	Range:	T8S F	R14W S24		
Landform (hillslope,	, terrace, etc.):		none	Local re	lief (concave,	, convex, none)	i:	none		
Slope (%): 0	Lat:			Long:		Datum	:	WGS84		
Soil Map Unit Name	<u> </u>	Wehadker	e silt loam		NWI Cla	assification:		PFO1A		
Are climatic/hydrolo	gic conditions of th	ie site typical	I for this tim	ne of the year? Ye	s X No	(If	no, explain	in remarks)		
Are vegetation				significantly distu		Are "normal cir	cumstance	s" present?		
Are vegetation	, soil	, or hydrol	logy	naturally problem		Yes		No		
								nswers in Remarks.)		
SUMMARY OF FI				ımpling point lo	cations, tra	nsects, impo	rtant featu	ıres, etc.		
Hydrophytic vegeta	· ·	Yes X	No	_						
Hydric soil present?		Yes X	No	Is the samp			_	N.		
Wetland hydrology	present?	Yes X	No	within a wet	iland?	Yes X	<u> </u>	No		
HYDROLOGY	1 11 -4									
Wetland Hydrolog	-				Se	-		mum of two required)		
Primary Indicators (minimum of one is	required; che	eck all that	apply)	•	Surface Soi	•	•		
Surface Water (A	•	_		auna (B13)	•			oncave Surface (B8)		
High Water Tabl	e (A2)	_		posits (B15) (LRR	-	Drainage P				
Saturation (A3)		_	Hydroger	n Sulfide Odor (C1)) -	Moss Trim I				
Water Marks (B1	,		Oxidized Rhizospheres on Living			Dry-Season Water Table (C2)				
Sediment Depos		_	Roots (C		-	Crayfish Bu				
Drift Deposits (B		_	Presence	e of Reduced Iron (C4)			erial Imagery (C9)		
Algal Mat or Cru				on Reduction in Ti	lled -	X Geomorphic	·	D2)		
Iron Deposits (B	,	_	Soils (C6	•			uitard (D3)			
	le on Aerial Imagery	(B7) <u> </u>		ck Surface (C7)	• •		al Test (D5)			
Water-Stained L	eaves (B9)	=	Other (Ex	xplain in Remarks)	in Remarks)		moss (D8)	(LRR T, U)		
Field Observations	s:						<u> </u>			
Surface water prese	ent? Yes _	No.	X Der	oth (inches)	_	Wetland	hydrology	present?		
Water table present	t? Yes _	No	X Der	oth (inches)	_					
Saturation present?	Yes _	No	X Dep	oth (inches)	_	Yes X	_ No			
(includes capillary fi	ringe)									
Describe recorded of	data (stream gauge), monitoring	well, aerial	photos, previous	inspections),	, if available:				
Remarks:										

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 72 **Dominance Test Worksheet** Absolute Dominant Indicator Tree Stratum (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) **Percent of Dominant Species** that are OBL, FACW, or FAC: 100.00% (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **24** x 1 = 20% of total cover: **FACW** species **113** x 2 = 50% of total cover: 226 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species 4 x 3 = 12 1 Quercus phellos FACU species x 4 = 2 UPL species x 5 = 0 Column totals **141** (A) **262** (B) 3 Prevalence Index = B/A = 1.86 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation X 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0 and at least 80% = Total Cover X of total cover has indicator status* 50% of total cover: 20% of total cover: 0.4 4 - Morphogical adaptations* (provide (Plot size: Herb Stratum supporting data in Remarks or on a separate sheet) 1 Coleataenia rigidula **FACW** Problematic hydrophytic vegetation* 12 **OBL** Saccharum baldwinii (explain) Boehmeria cylindrica 10 3 **FACW** Mikania scandens Ν **FACW** 4 *Indicators of hydric soil and wetland hydrology must be Persicaria hydropiperoides OBL present, unless disturbed or problematic **Definitions of Four Vegetation Strata:** Gratiola neglecta Ν OBL Panicum verrucosum 1 Ν **FACW** Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), Ludwigia alternifolia 1 Ν OBL regardless of height. Glyceria striata **OBL** Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or 11 equal to 3.28 ft (1 m) tall = Total Cover Herb - All herbaceous (non-woody) plants, 135 regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: (Plot size: 15-m radius) Woody Vine Stratum Vitis rotundifolia **FAC** Woody Vine – All woody vines greater than 3.28 ft 2 3 4 5 Hydrophytic = Total Cover vegetation 20% of total cover: **0.8** Yes X No ____ present? 50% of total cover:

Remarks: (Include photo numbers here or on a separate sheet)

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r conf	irm the absence of ind	icators.)			
Depth	Matrix		Redo	x Features	S						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 4	10YR 5/2	80	10YR 5/8	10	С	PL	silty clay loam				
			7.5YR 4/6	10	С	PL	<u> </u>				
4 - 8	10YR 5/1	40	10YR 5/8	10	С	М	sandy clay				
	10YR 4/2	40	7.5YR 4/6	10	С	М					
8 - 12	10YR 5/1	75	7.5YR 5/8	15	С	М	sandy clay				
	10YR 5/3	10	1101111010				curray oray				
	10111 0/0	10									
¹ Type: C = (Concentration D = D	enletion PA	/ / = Reduced Matrix, N	MS - Mack	red Sand	Grains	² Location: DL = Dr	ore Lining, M = Matrix			
Hydric Soil		epielion, ixiv				Grains					
Histisol			Polyvalue Below (LRR S, T, U)	Surface (S8)			dicators for Problematic Hydric Soils ³ : 1 cm Muck (A10) (LRR O)			
	pipedon (A2)	,	Thin Dark Surfac	م (SQ) (I F	PPSTI	n		2 cm Muck (A10) (LRR S)			
	istic (A3)		Loamy Mucky M			-		_			
	en Sulfide (A4)		Loamy Gleyed M		,)		Reduced Vertic (F1 (outside MLRA 15)	•			
	d Layers (A5)		X Depleted Matrix				 `	. ,			
	Bodies (A6) (LRR P	. T. U)	Redox Dark Surf	` '			(LRR P, S, T)	Piedmont Floodplain Soils (F19)			
	ucky Mineral (A7) (LI	· · · · · · · · · · · · · · · · · · ·	Depleted Dark S)			- ' '			
	resence (A8) (LRR L		X Redox Depression	•	,			Anomalous Bright Loamy Soils (F20) (MLRA 153B)			
	uck (A9) (LRR P. T)	,	 Marl (F10) (LRR	` '			 :	- `			
	d Below Dark Surfac	e (A11)	Depleted Ochric	•	RA 151)			Very Shallow Dark Surface (TF12)			
 '	ark Surface (A12)	, ,		se Masses (F12) Other (explain in remarks)							
	rairie Redox (A16)		(LRR O, P, T)	1) 0000011	12)			,			
(MLRA		•	Umbric Surface ((F13) (LRF	R P, T, U)						
Sandy N	Mucky Mineral (S1)	•	Delta Ochric (F1				2				
(LRR O		•	Reduced Vertic ((F18) (MLF	RA 150A,	150E	³ Indicators of hydro				
Sandy 0	Gleyed Matrix (S4)	•	Piedmont Floodp	olain Soils	(F19) (M L	LRA 14	and welland nydrol 19A) present, unless dist	and weltand hydrology must be A) present, unless disturbed or			
Sandy F	Redox (S5)	•	—— Anomalous Brigh				problematic				
Stripped	d Matrix (S6)		(MLRA 149A, 15			•					
Dark Su	ırface (S7) (LRR P, S	S, T, U)									
Postrictivo	Layer (if observed)										
Type:	Layer (II observed)	•									
Depth (inche	es):			Hydric soil present?			Yes X	No			
						-					
Remarks:											

Project/Site	Moro Creek N	litigation Ba	nk	City/	County:	Bunn	Sa	mpling Date:	2018/10/09		
Applicant/Owner:	Arkansas	Department	of Trans	 sportatio	n State:	AR	Sa	mpling Point	Plot 73		
Investigator(s): Kayti Ewing, Joe Ledvina Section, Township, Range: T8S R14W S24							S R14W S24				
Landform (hillslope	, terrace, etc.):		none		Local relie	ef (concave,	convex, n	one):	none		
Slope (%): 0	Lat:				Long:		Da	ntum:	WGS84		
Soil Map Unit Name	e	Wehad	dkee silt	loam		NWI Cla	ssification	: <u></u>	PFO1A		
Are climatic/hydrolo	ogic conditions	of the site typ	oical for th	his time c	of the year? Yes	X No		(If no, expla	ain in remarks)		
Are vegetation	, soil	, or hy	drology_	sig	nificantly disturb	ed? A	Are "norma	al circumstan	ces" present?		
Are vegetation	, soil	, or hy	drology_	nat	urally problemat	ic?	Yes	sX	No		
						(If needed,	explain any	answers in Remarks.)		
SUMMARY OF FI		ach site ma	p showi	ng sam	oling point loc	ations, trar	nsects, in	nportant fea	tures, etc.		
Hydrophytic vegeta		Yes		lo							
Hydric soil present		Yes	X N	lo	Is the sample						
Wetland hydrology	present?	Yes	Х N	lo	within a wetla	and?	Yes	X	No		
Remarks: (Explain	alternative prod	edures here	or in a se	eparate re	eport.)						
HYDROLOGY											
Wetland Hydrolog	y Indicators:					Se	condary Ir	ndicators (mi	nimum of two required)		
Primary Indicators	(minimum of on	e is required	; check a	ll that ap	ply)	_	Surface	e Soil Cracks	(B6)		
Surface Water (A1)		Aqı	uatic Fauı	na (B13)	_	Sparse	ly Vegetated	Concave Surface (B8)		
High Water Tab	le (A2)		Marl Deposits (B15) (LRR U)			J) _	Drainage Patterns (B10)				
Saturation (A3)	Hydrogen Sulfide Odor (C1)			_	Moss Trim Lines (B16)						
Water Marks (B1)			Oxidized Rhizospheres on Living			/ina _	Dry-Season Water Table (C2)				
Sediment Deposits (B2)			Roots (C3)			_	Crayfish Burrows (C8)				
Drift Deposits (B3)			Presence of Reduced Iron (C4)			4) _	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Cru	ıst (B4)		Recent Iron Reduction in Tilled			ed _	X Geomorphic Position (D2)				
Iron Deposits (B	35)		Soils (C6)			<u> </u>	Shallow Aquitard (D3)				
Inundation Visib	le on Aerial Ima	gery (B7)	Thin Muck Surface (C7)				X FAC-Neutral Test (D5)				
Water-Stained L	eaves (B9)		Other (Explain in Remarks)				Sphagnum moss (D8) (LRR T, U)				
Field Observation	s·										
Surface water pres		i	No X	Depth	(inches)		Wetla	and hydrolo	av present?		
Water table presen				Depth	· ·	-		ay a 0.0;	gy p. 000		
Saturation present				Depth		-	Yes	X ı	No		
(includes capillary f					(-					
Describe recorded	<u> </u>	auge monito	ring well.	aerial ph	notos, previous ir	nspections).	if available	e:			
	(9-		,		, p						
Remarks:											

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 73 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **0** x 1 = 20% of total cover: **FACW** species **105** x 2 = 50% of total cover: 210 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species **5** x 3 = 15 FACU species 1 Ilex opaca **FAC** x 4 =FACU UPL species Hamamelis virginiana x 5 = 0 Column totals Rubus laudatus **111** (A) 229 (B) Prevalence Index = B/A = 2.06 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation **X** 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0 and at least 80% = Total Cover X of total cover has indicator status* 50% of total cover: 20% of total cover: 8.0 4 - Morphogical adaptations* (provide Herb Stratum (Plot size: supporting data in Remarks or on a separate sheet) 1 Panicum verrucosum 100 **FACW** Problematic hydrophytic vegetation* Boehmeria cylindrica **FACW** (explain) 3 *Indicators 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) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall Herb - All herbaceous (non-woody) plants, = Total Cover 105 regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: 21 ft tall (Plot size: 15-m radius) Woody Vine Stratum Smilax rotundifolia **FAC** Woody Vine – All woody vines greater than 3.28 ft **FAC** in height. Smilax glauca **FAC** Vitis rotundifolia 4 5 Hydrophytic 3 = Total Cover vegetation Yes X No____ 20% of total cover: present? 50% of total cover: 1.5 0.6 Remarks: (Include photo numbers here or on a separate sheet)

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r conf	irm the absence of ind	icators.)			
Depth	Matrix		Redo	x Feature	S						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 2	10YR 3/1	45	7.5YR 5/8	5	С	М	silty clay loam				
	10YR 4/1	45	10YR 5/8	5	C	М					
2 - 9	10YR 5/2	80	7.5YR 5/8	10	၁	М	silty clay loam				
	10YR 5/3	10				М					
9 - 12	10YR 5/3	80	7.5YR 5/8	10	С	М	sandy clay				
	10YR 5/2	10									
¹ Type: C = 0	Concentration, D = D	epletion, RN	I = Reduced Matrix, I	MS = Mask	ked Sand	Grains	s. ² Location: PL = Po	ore Lining, M = Matrix			
Hydric Soil	Indicators:		Polyvalue Below	Surface (S8)		Indicators for Problem	natic Hydric Soils³:			
Histisol	(A1)		(LRR S, T, U)	(,		1 cm Muck (A10) (L	.RR O)			
Histic E	pipedon (A2)		Thin Dark Surfac	ce (S9) (LF	RR S, T, U	J)	2 cm Muck (A10) (L	.RR S)			
Black H	istic (A3)		Loamy Mucky M	ineral (F1)	(LRR O)		Reduced Vertic (F1	8)			
Hydroge	en Sulfide (A4)		Loamy Gleyed M	1atrix (F2)			(outside MLRA 15	0A, B)			
	d Layers (A5)	•	X Depleted Matrix				Piedmont Floodplai	n Soils (F19)			
<u> </u>	Bodies (A6) (LRR P	· · · · · · · · · · · · · · · · · · ·	Redox Dark Surf				(LRR P, S, T)				
	ucky Mineral (A7) (Ll		Depleted Dark S	7 mornalede Bright Zearry Cone (17							
	resence (A8) (LRR L	J)	X Redox Depression	` '			(MLRA 153B)				
	uck (A9) (LRR P. T)	,,,,,	Marl (F10) (LRR	•			Red Parent Materia				
 '	d Below Dark Surfac	e (A11)	Depleted Ochric	(F11) (ML	RA 151)		Very Shallow Dark	· ·			
	ark Surface (A12)		Iron-Manganese	Masses (F	- 12)		Other (explain in re	marks)			
	rairie Redox (A16)	•	(LRR O, P, T)	(E42) (I D E	. D. T. IIV						
(MLRA	-	,	Umbric Surface (
Sandy N (LRR O	Mucky Mineral (S1)		Delta Ochric (F1		-	1505	³ Indicators of hydro	phytic vegetation			
	Gleyed Matrix (S4)	,		tic (F18) (MLRA 150A, 150E and weltand hydrology must be odplain Soils (F19) (MLRA 149A) present, unless disturbed or							
	Redox (S5)			1.1							
	d Matrix (S6)		Anomalous Brigh (MLRA 149A, 15)	problematio				
	ırface (S7) (LRR P, \$	S. T. U)	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,						
	Layer (if observed)	:									
Type:	,		l				V				
Depth (inche	es):		¹	Hydric soi	l present	t?	Yes X	No			
Remarks:			•								

Project/Site	Moro Creek Mitigation Bank		City/	County:	Bunn	S	Sampling Date:		018/10/09		
Applicant/Owner:	Arkansas	s Departmei	nt of T	ransportatio	n State:	AR	Sa	Sampling Point:		Plot 74	
Investigator(s):	Kay	∕ti Ewing, Jo	oe Led	lvina	Section,	Township,	Range:		T8S R14W S	324	
Landform (hillslope	, terrace, etc.)): 	n	one	Local relie	f (concave,	, convex, r	none):	no	ne	
Slope (%): 0	Lat:				Long:		D	atum:	WGS	384	
Soil Map Unit Name	9	Weh	adkee	silt loam		NWI Cla	assificatior	า:	PFO1	A	
Are climatic/hydrolo	gic conditions	of the site t	ypical	for this time of	of the year? Yes	X No		(If no, ex	xplain in rem	arks)	
Are vegetation							Are "norm	al circums	tances" pres	ent?	
Are vegetation	, soil	, or h	nydrolo	ogynat	urally problemati			es X			
							•	•	•	in Remarks.)	
SUMMARY OF FI		tach site m	ap sh	owing samp	oling point loca	itions, tra	nsects, ii	mportant	features, e	tc.	
Hydrophytic vegeta	•	Yes_	<u> X</u>	No							
Hydric soil present?		Yes_	<u>X</u>	_ No	Is the sample						
Wetland hydrology	present?	Yes_	Х	No	within a wetla	nd?	Yes_	<u> </u>	No		
Remarks: (Explain a	alternative pro	cedures her	e or in	ı a separate re	eport.)						
HYDROLOGY											
Wetland Hydrolog	y Indicators:					S	econdary l	Indicators ((minimum of	two required)	
Primary Indicators ((minimum of o	eck all that app	ply)		Surfac	ce Soil Crac	cks (B6)				
X Surface Water (A1)				Aquatic Fauna (B13)			Sparsely Vegetated Concave Surface (B8)				
X High Water Table (A2)				Marl Deposi	its (B15) (LRR U)		age Patterns			
X Saturation (A3)				– Hydrogen St	ulfide Odor (C1)	•		Trim Lines			
Water Marks (B1)				Ovidized Phi	izospheres on Liv	ina	Dry-Se	eason Wate	er Table (C2)		
Sediment Depos	-			Roots (C3)	izospileres on Liv	g -		sh Burrows			
Drift Deposits (B	33)			_	Reduced Iron (C4	1)	Satura	ation Visible	on Aerial Im	agery (C9)	
Algal Mat or Cru	ıst (B4)			Recent Iron	Reduction in Tille	- d	X Geomorphic Position (D2)				
Iron Deposits (B	5)			Recent Iron Reduction in Tilled Soils (C6)			Shallow Aquitard (D3)				
Inundation Visib	le on Aerial Im	agery (B7)		Thin Muck S	urface (C7)	-	X FAC-N	FAC-Neutral Test (D5)			
Water-Stained L	eaves (B9)			Other (Expla	in in Remarks)	-	Sphagnum moss (D8) (LRR T, U)				
Field Observations				_		<u> </u>					
Surface water prese		es X	No	Denth	(inches) 3		Wetl	land hydro	ology prese	nt?	
Water table present			No		(inches)	•	1101	ana nyare	nogy proces		
Saturation present?			No		(inches)	•	Yes	X	No		
(includes capillary f		<u> </u>	110	Bopui	(11101100)	•					
Describe recorded		nauge monif	toring :	well aerial ph	notos previous ir	spections)	if availab	le.			
	aa.a (55a 5	,go,o		, aa. p			,				
Remarks:	Remarks:										

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 74 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) 1 Quercus nigra FAC that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: 3 (B) Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **95** x 1 = 50% of total cover: 20% of total cover: 0.5 **FACW** species x 2 =0 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species x3 =12 1 Liquidambar styraciflua **FACU** species **FAC** x 4 =0 2 UPL species x 5 = 0 3 Column totals **99** (A) **107** (B) Prevalence Index = B/A = 1.08 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation **X** 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0 and at least 80% = Total Cover X of total cover has indicator status* 50% of total cover: 0.5 20% of total cover: 4 - Morphogical adaptations* (provide Herb Stratum 1m² (Plot size: supporting data in Remarks or on a separate sheet) 1 Rhynchospora corniculata Problematic hydrophytic vegetation* (explain) 3 *Indicators 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) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall = Total Cover Herb - All herbaceous (non-woody) plants, 95 regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: 19 (Plot size: 15-m radius) Woody Vine Stratum Vitis rotundifolia Woody Vine – All woody vines greater than 3.28 ft **FAC** Smilax rotundifolia **FAC** 3 4 5 Hydrophytic 2 = Total Cover vegetation Yes X No 20% of total cover: **0.4** present? 50% of total cover: Remarks: (Include photo numbers here or on a separate sheet)

Profile Des	cription: (Describe	to the dept	h needed to docun	nent the in	dicator o	r confi	m the absence of inc	licators.)	
Depth	Matrix		Red	lox Feature					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0 - 1	10YR 3/2	100					silty clay loam		
1 - 4	10YR 5/1	98	10YR 6/8	2	С	М	silty clay loam		
4 - 12	10YR 4/2	96	10YR 5/8	2	С	М	sandy clay		
			7.5YR 5/8	2	С	М			
¹ Type: C = 0	Concentration, D = D	epletion, RM	I = Reduced Matrix,	MS = Masl	⊥ ked Sand	Grains.	² Location: PL = P	ore Lining, M = Matrix	
	Indicators:	<u> </u>	Polyvalue Belov				Indicators for Probler		
Histisol			(LRR S, T, U)	W Surface (30)		1 cm Muck (A10) (-	
Histic E	pipedon (A2)	-	Thin Dark Surfa	nce (S9) (Li	RR S, T, I	J) _	2 cm Muck (A10) (·	
_	istic (A3)	-	— Loamy Mucky N			_	Reduced Vertic (F	•	
—— Hydroge	en Sulfide (A4)	-	Loamy Gleyed I	Matrix (F2)			(outside MLRA 15		
	d Layers (A5)	-	X Depleted Matrix			-	— Piedmont Floodpla		
Organic	Bodies (A6) (LRR P	P, T, U)	Redox Dark Sui	rface (F6)			(LRR P, S, T)		
5 cm Mi	ucky Mineral (A7) (L l	RR P, T, U)	Depleted Dark S	Surface (F7	·)	_	Anomalous Bright	Loamv Soils (F20)	
Muck P	resence (A8) (LRR L	J)	Redox Depress						
1 cm M	uck (A9) (LRR P. T)		Marl (F10) (LRF	R U)			Red Parent Materia	al (TF12)	
Deplete	d Below Dark Surfac	e (A11)	Depleted Ochrid	c (F11) (ML	RA 151)		Very Shallow Dark	Surface (TF12)	
Thick D	ark Surface (A12)	<u>-</u>	 Iron-Manganese	e Masses (F12)	_	Other (explain in re	emarks)	
Coast P	rairie Redox (A16)	_	(LRR O, P, T)						
(MLRA	150A)	_	Umbric Surface	(F13) (LRI	R P, T, U))			
Sandy N	Mucky Mineral (S1)	_	Delta Ochric (F	17) (MLRA	151)		31		
LRR O	, S)	_	Reduced Vertic	. , .			³ Indicators of hydro and weltand hydro	logy must be	
Sandy (Gleyed Matrix (S4)	-	Piedmont Flood	lplain Soils	(F19) (M I	LRA 14	present, unless disturbed or		
	Redox (S5)		Anomalous Brig))	problematic		
	d Matrix (S6)	-	(MLRA 149A, 1	53C, 153D)				
Dark Su	ırface (S7) (LRR P, \$	S, T, U)							
Restrictive	Layer (if observed)):							
Туре:	,								
Depth (inch	es):			Hydric so	il presen	t?	Yes X	No	
D									
Remarks:									

Project/Site	Moro Creek Mitig	ation Bank	City/	County:	Bunn	Sampling	Date: 2018 /	10/09		
Applicant/Owner:	Arkansas Dep	artment of T	ransportatio	on State:	AR	Sampling	Point: Plot	75		
Investigator(s):	Kayti Ew	ring, Joe Led	lvina	Section, T	Γownship, Ran	ige:	T8S R14W S24			
Landform (hillslope	, terrace, etc.):	n	one	Local relief	(concave, con	ivex, none):	none			
Slope (%): 0	Lat:			Long:		Datum:	WGS84			
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Classif	ication:	PFO1A			
Are climatic/hydrolo	ogic conditions of th	e site typical	for this time of	of the year? Yes	X No	(If no,	, explain in remarks	;)		
Are vegetation	, soil	, or hydrolo	ogysigi	nificantly disturbe	d? Are	"normal circur	mstances" present?	?		
Are vegetation	, soil	, or hydrolo	ogynat	urally problemation		Yes X				
					•	· ·	n any answers in R	emarks.)		
SUMMARY OF FI			owing samp	oling point loca	tions, transe	cts, importa	nt features, etc.			
Hydrophytic vegeta	*	Yes X	No							
Hydric soil present?		Yes X	_ No	Is the sampled						
Wetland hydrology	present?	Yes X	No	within a wetlar	1d? \	Yes X	No			
Remarks: (Explain			·							
HYDROLOGY										
Wetland Hydrolog	· -				Secor	ndary Indicator	rs (minimum of two	required)		
Primary Indicators ((minimum of one is	required; che	ck all that app	ply)		Surface Soil Co				
Surface Water (A1)			_Aquatic Faur				tated Concave Surfa	ace (B8)		
High Water Table (A2)			_	its (B15) (LRR U)		Drainage Patte				
Saturation (A3)			_Hydrogen Su	ulfide Odor (C1)		Moss Trim Line	es (B16)			
Water Marks (B				izospheres on Livi	···9 —	-	ater Table (C2)			
Sediment Depos		_	Roots (C3)			Crayfish Burro				
Drift Deposits (B	-	_	Presence of	Reduced Iron (C4)			ble on Aerial Imager	y (C9)		
Algal Mat or Cru	` '		Recent Iron Reduction in Tilled			X Geomorphic Position (D2)				
Iron Deposits (B	•	_	Soils (C6)			Shallow Aquitard (D3)				
	le on Aerial Imagery	(B7)	Thin Muck S			FAC-Neutral Test (D5)				
Water-Stained L	.eaves (B9)		Other (Expla	ain in Remarks)		Sphagnum moss (D8) (LRR T, U)				
Field Observations	s:									
Surface water prese	ent? Yes	No	X Depth	(inches)		Wetland hyd	drology present?			
Water table present	t? Yes _	No	X Depth	(inches)						
Saturation present?	? Yes _	No	X Depth	(inches)	Ye	es X	No			
(includes capillary f	ringe)									
Describe recorded	data (stream gauge	, monitoring \	well, aerial ph	notos, previous ins	spections), if a	vailable:				
Remarks:	emarks:									

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 75 **Dominance Test Worksheet** Absolute Dominant Indicator Tree Stratum (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) Percent of Dominant Species **75.00%** (A/B) that are OBL, FACW, or FAC: **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **20** x 1 = 20% of total cover: **FACW** species 50% of total cover: x 2 =140 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species 8 x 3 = 24 1 Quercus phellos FACU species 20 80 **FACW** x 4 = FAC UPL species Quercus nigra 0 x 5 = 0 Carya alba Column totals **118** (A) **264** (B) Prevalence Index = B/A = 2.24 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation **X** 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0 and at least 80% = Total Cover X of total cover has indicator status* 50% of total cover: 20% of total cover: 1.8 4 - Morphogical adaptations* (provide (Plot size: 1m² Herb Stratum supporting data in Remarks or on a separate sheet) 1 Panicum verrucosum **FACW** Problematic hydrophytic vegetation* 20 **FACU** 2 Lespedeza cuneata (explain) 15 3 Bidens aristosa **FACW** Rhexia mariana 15 Ν **FACW** 4 *Indicators of hydric soil and wetland hydrology must be Persicaria hydropiperoides OBL present, unless disturbed or problematic **FACW Definitions of Four Vegetation Strata:** Mikania scandens 10 Ν Gratiola neglecta Ν **OBL** Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), Nyssa sylvatica **FAC** regardless of height. Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall 110 = Total Cover Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: Woody Vine Stratum (Plot size: 15-m radius) Woody Vine – All woody vines greater than 3.28 ft 5 Hydrophytic = Total Cover vegetation Yes X No 20% of total cover: present? 50% of total cover: Remarks: (Include photo numbers here or on a separate sheet)

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the inc	dicator o	r confi	rm the absence of inc	dicators.)			
Depth	Matrix		Redo	ox Features	6						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 4	10YR 3/2	98	10YR 3/6	2	С	М	silty clay loam				
4 - 10	10YR 3/2	98	10YR 4/6	2	C	М	silty clay loam				
10 - 12	10YR 4/2	88	10YR 4/6	2	С	M	silty clay loam				
	10YR 4/3	10									
¹ Type: C = 0	Concentration, D = D	epletion, RM	I = Reduced Matrix, I	MS = Mask	ed Sand	Grains	. ² Location: PL = P	ore Lining, M = Matrix			
Hydric Soil	Indicators:		Polyvalue Below	Surface (S8)		Indicators for Proble	matic Hydric Soils ³ :			
Histisol	(A1)	_	(LRR S, T, U)	(/	_	1 cm Muck (A10) (LRR O)			
Histic E	pipedon (A2)		Thin Dark Surfac	ce (S9) (LF	RR S, T, L	J)	2 cm Muck (A10) (LRR S)			
Black H	istic (A3)	<u>-</u>	Loamy Mucky M	lineral (F1)	(LRR O)		Reduced Vertic (F	18)			
Hydroge	en Sulfide (A4)	-	Loamy Gleyed M	/latrix (F2)			(outside MLRA 15	50A, B)			
	d Layers (A5)	-	X Depleted Matrix	` '			Piedmont Floodpla	in Soils (F19)			
	Bodies (A6) (LRR P	-	Redox Dark Surf			-	(LRR P, S, T)				
	ucky Mineral (A7) (LI		Depleted Dark S	Thomasus Bright Learny Cone (1							
_	resence (A8) (LRR L	J) <u> </u>	Redox Depression	` '		-	(MLRA 153B)				
	uck (A9) (LRR P. T)	· · · · · ·	Marl (F10) (LRR	•		-	Red Parent Materi				
	d Below Dark Surfac	e (A11)	Depleted Ochric	(F11) (ML	RA 151)	-	Very Shallow Dark	· ·			
I hick D	ark Surface (A12)		Iron-Manganese	Masses (F	-12)	-	Other (explain in re	emarks)			
	Prairie Redox (A16)	-	(LRR O, P, T)	/E42\ /I DE	. D. T. IIV						
(MLRA	-	-	Umbric Surface Delta Ochric (F1			1					
Sandy N (LRR O	Mucky Mineral (S1)	-	Reduced Vertic		-	1505	³ Indicators of hydro	ophytic vegetation			
	Gleyed Matrix (S4)	-					and weltand hydro	and weltand hydrology must be present, unless disturbed or problematic			
	Redox (S5)	-					present, unless dis problematic				
	d Matrix (S6)		(MLRA 149A, 1	right Lourny Cond (1 20)							
	ırface (S7) (LRR P, \$	S, T, U)		,	,						
	Layer (if observed)	:									
Type:	\				•		V V	NI -			
Depth (inch	es):			Hydric soi	ı presen	[?	Yes X	No			
Remarks:											

Project/Site	Moro Creek N	litigation Ba	ınk	Cit	y/County:	Bunn	Sampling Da	ite: 2018/10/09			
Applicant/Owner:	Arkansas	Department	of Trans	- sportat	ion State:	AR	Sampling Poi	int: Plot 76			
Investigator(s):	Kayt	i Ewing, Joe	Ledvina	a	Section	n, Township, F	Range: 1	Γ8S R14W S24			
Landform (hillslope	, terrace, etc.):	-	none		Local rel	lief (concave, o	convex, none):	none			
Slope (%): 0	Lat:				Long:		Datum:	WGS84			
Soil Map Unit Name	e	Wehad	dkee silt	loam		NWI Clas	ssification:	PFO1A			
Are climatic/hydrolo	gic conditions	of the site typ	oical for t	nis time	of the year? Ye	s X No	(If no, ex	plain in remarks)			
Are vegetation	, soil	, or hy	drology_	s	ignificantly distur	rbed? A	re "normal circumst	ances" present?			
Are vegetation	, soil	, or hy	drology_	n	aturally problem	atic?	Yes X	No			
						•	•	ny answers in Remarks.)			
		ach site ma	p showi	ng sar	npling point lo	cations, tran	sects, important f	eatures, etc.			
Hydrophytic vegeta	-	Yes_		0	4						
Hydric soil present		Yes		lo	Is the samp						
Wetland hydrology	present?	Yes_	N	o <u>X</u>	within a wet	land?	Yes	No X			
Remarks: (Explain	alternative proc	edures here	or in a se	eparate	report.)						
HYDROLOGY								_			
Wetland Hydrolog	•					Sec	condary Indicators (minimum of two required)			
Primary Indicators	minimum of on	e is required	; check a	II that a	apply)	_	Surface Soil Cracl	, ,			
Surface Water (_Aquatic Fauna (B13)			Sparsely Vegetated Concave Surface (B8)						
High Water Table (A2)					osits (B15) (LRR						
Saturation (A3)			Hy	drogen	Sulfide Odor (C1)	_	Moss Trim Lines (B16)			
Water Marks (B	1)		Ox	idized F	Rhizospheres on L	_iving	Dry-Season Water Table (C2) Crayfish Burrows (C8)				
Sediment Depos	sits (B2)		Ro	ots (C3)	_	Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (E	33)		Pre	esence	of Reduced Iron (
Algal Mat or Cru	ıst (B4)		Re	cent Iro	n Reduction in Ti	lled	X Geomorphic Posit	ion (D2)			
Iron Deposits (B	•		So	ils (C6)		_	Shallow Aquitard (
	le on Aerial Ima	gery (B7)			Surface (C7)	_	FAC-Neutral Test (D5)				
Water-Stained L	eaves (B9)		Oth	ner (Exp	olain in Remarks)	_	Sphagnum moss (D8) (LRR T, U)				
Field Observation	s:										
Surface water pres	ent? Yes		No X	Dept	th (inches)		Wetland hydro	logy present?			
Water table presen	t? Yes		No X	Dept	th (inches)	_					
Saturation present?	Yes		No X	_ Dept	th (inches)		Yes	No <u>X</u>			
(includes capillary f	ringe)										
Describe recorded	data (stream ga	auge, monito	ring well,	aerial _l	photos, previous	inspections),	if available:				
Remarks:											
	vegetation could pass FAC-neutral test, depending on Rubus laudatus										

	Absolute	Dominant	Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size: 30-m radius)	% Cover	Species	Staus	Number of Dominant Species
1 Nyssa sylvatica	20	Υ	FAC	that are OBL, FACW, or FAC: 7 (A)
2 Liquidambar styraciflua	10	Υ	FAC	Total Number of Dominant
3		<u> </u>		Species Across all Strata: 8 (B)
4				
5				Percent of Dominant Species that are OBL, FACW, or FAC: 87.50% (A/B)
6				lilat ale ODL, i AOW, OI i AO. OI.3070 (770)
7				Prevalence Index Worksheet
0				Total % Cover of:
8		Total Covo		
50% of total cover:		= Total Cover of total cover		OBL species 0 x 1 = 0 FACW species 50 x 2 = 100
	20%) lulai cuv c i	. 6	·
Sapling/Shrub Stratun (Plot size: 15-m radius)		v	510	· — — —
1 Carpinus caroliniana	30	<u>Y</u>	FAC	FACU species 1 x 4 = 4
2 Symplocos tinctoria	20	<u>Y</u>	FAC	UPL species 0 x 5 = 0
3 Ilex opaca	10	<u>N</u>	FAC	Column totals <u>160</u> (A) <u>431</u> (B)
4 Liquidambar styraciflua	10	<u>N</u>	FAC	Prevalence Index = B/A = 2.69
5 Quercus phellos	5	<u>N</u>	FACW	Hydrophytic Vegetation Indicators:
6 Quercus nigra	2	N	FAC	1 - Rapid test for hydrophytic vegetation
7 Hamamelis virginiana	1	N	FACU	X 2 - Dominance test is >50%
8				3 - Prevalence index is ≤3.0 and at least 80%
		= Total Cove	-	X of total cover has indicator status*
50% of total cover:	9 20% c	of total cover	15.6	4 - Morphogical adaptations* (provide
Herb Stratum (Plot size: 1m ²))			supporting data in Remarks or on a
1 Panicum verrucosum	45	<u> </u>	FACW	separate sheet)
2 Eupatorium serotinum	1	N	FAC	Problematic hydrophytic vegetation*
3				(explain)
4				*Indicators of hydric soil and wetland hydrology must be
5		_		present, unless disturbed or problematic
6				Definitions of Four Vegetation Strata:
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8				or more in diameter at breast height (DBH),
9				regardless of height.
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12				equal to 3.28 ft (1 m) tall
	46 =	Total Cove		Herb – All herbaceous (non-woody) plants,
50% of total cover: 2		of total cover		regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius))			ft tall
1 Smilax rotundifolia	3	Υ	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Rubus laudatus	3	<u>Y</u>		in height.
3 Vitis rotundifolia		<u> </u>	FAC	
4 Vitis cinerea	-		FAC	
5				
6				O James Barrier
	9 :	Total Cove		Hydrophytic
50% of total cover: 4.		of total cover		vegetation present? Yes X No
		II total oove.		present: 103 <u>//</u> 110
Pamarka: (Includa nhata numbere bare ar an a sanar	oto cheet)			
Remarks: (Include photo numbers here or on a separa	ate sneer)			

Sampling Point: Plot 76

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r confi	rm the absence of inc	licators.)			
Depth	Matrix		Rede	edox Features							
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 6	10YR 3/2	98	10YR 4/6	2	С	M	silty clay loam				
6 - 12	10YR 3/2	90	10YR 3/6	10	С	М	sandy clay	"heavier clay"			
¹ Type: C = 0	Concentration, D = D	enletion RM	I = Reduced Matrix	MS = Mask	ed Sand	Grains	² I ocation: PI = P	ore Lining, M = Matrix			
	Indicators:	opiotion, rav					Indicators for Problem				
Histisol			Polyvalue Below (LRR S, T, U)	v Surrace (58)		1 cm Muck (A10) (_			
	pipedon (A2)	-	Thin Dark Surfa	ce (S9) (LF	RRS.T.I		2 cm Muck (A10) (•			
_	istic (A3)	-	Loamy Mucky M			•	Reduced Vertic (F				
	en Sulfide (A4)	-	Loamy Gleyed N		(,		(outside MLRA 15	,			
	d Layers (A5)	-	X Depleted Matrix	` '		•	Piedmont Floodpla	•			
	Bodies (A6) (LRR P	P, T, U)	— ' Redox Dark Sur	` '			(LRR P, S, T)	111 30113 (1 19)			
	ucky Mineral (A7) (L l	-	— Depleted Dark S)	•	Anomalous Bright	Loamy Soils (F20)			
_	resence (A8) (LRR L	-	Redox Depressi								
1 cm M	uck (A9) (LRR P. T)	-	 Marl (F10) (LRR	R U)		•	Red Parent Materia	al (TF12)			
 Deplete	d Below Dark Surfac	e (A11)	Depleted Ochric	(F11) (ML	RA 151)	•	— Very Shallow Dark				
Thick D	ark Surface (A12)	•	—— Iron-Manganese	e Masses (F	- 12)	•	Other (explain in re	emarks)			
Coast F	Prairie Redox (A16)		(LRR O, P, T)	(/	•	<u> </u>				
(MLRA		-	Umbric Surface	(F13) (LRF	R P, T, U))					
Sandy I	Mucky Mineral (S1)	-	Delta Ochric (F1	17) (MLRA	151)		3				
(LRR [°] O	• , ,		Reduced Vertic	(F18) (MLF	RA 150A,	150E	³ Indicators of hydro				
Sandy (Gleyed Matrix (S4)	_	Piedmont Flood	plain Soils	(F19) (MI	LRA 14	(PA) present, unless dis	and weltand hydrology must be A) present, unless disturbed or			
Sandy I	Redox (S5)		Anomalous Brig				problematic				
Strippe	d Matrix (S6)	-	(MLRA 149A, 1	53C, 153D)						
Dark Su	ırface (S7) (LRR P, \$	S, T, U)									
Restrictive	Layer (if observed)	:									
Type:	_u , 0: (.: 0.000:10u)	•									
Depth (inch	es):			Hydric soi	l presen	t?	Yes X	No			
Remarks:											

Project/Site I	Moro Creek Mitig	gation Ba	ank	City/	County:	Bunn	S	Sampling Da	ate:	2018/10/09
-	Arkansas De	_						ampling Po		Plot 77
Investigator(s):	Kayti E	wing, Joe	e Led	vina	Section	on, Township, I	Range:		T8S R14	W S24
Landform (hillslope,	terrace, etc.):		nc	one	Local re	elief (concave,	convex,	none):		none
Slope (%): 0	Lat:				Long:			Datum:	V	VGS84
Soil Map Unit Name		Weha	dkee	silt loam		NWI Cla	ssificatio	n:	PF	O1A
Are climatic/hydrolog	jic conditions of t	he site ty	pical f	or this time o	of the year? Y	es X No		(If no, ex	xplain in r	remarks)
Are vegetation			-		nificantly distu		Are "norn	nal circums	tances" p	resent?
Are vegetation	, soil	, or hy	ydrolo:	gynat	turally problen	natic?	Y	es X	No_	
							•		•	ers in Remarks.)
SUMMARY OF FIN				Ī	oling point l	ocations, trai	nsects, i	mportant	features	, etc.
Hydrophytic vegetati	on present?	Yes_		No						
Hydric soil present?		Yes_	X	_ No	Is the samp					
Wetland hydrology p	resent?	Yes_	Х	No	within a we	etland?	Yes_	X	No_	
HYDROLOGY	Indiantara									
Wetland Hydrology		n roquirod	di abai	ak all that an	mls.()	Se	-		•	n of two required)
Primary Indicators (n		s required	ı, cnec			-		ce Soil Crac		
Surface Water (A	•			Aquatic Faur		_ 				ve Surface (B8)
High Water Table (A2)				-	its (B15) (LRI	_		age Patterns		
X Saturation (A3)				_Hydrogen St	ulfide Odor (C	¹⁾ –		Trim Lines		
Water Marks (B1)					izospheres on	Living _		Season Wate		<i>3</i> 2)
Sediment Deposit				Roots (C3)	Doduced Iron	(C4)		ish Burrows		I Imagany (CO)
Drift Deposits (B3				_	Reduced Iron	-		norphic Posi		I Imagery (C9)
X Algal Mat or Crus					Reduction in 1	illed _		•	` '	
Iron Deposits (B5	<i>)</i> e on Aerial Imager	v (B7)		Soils (C6) Thin Muck S	Surface (C7)	-		ow Aquitard		
Water-Stained Le	-	у (Б/)		-	ain in Remarks	<u>-</u>	FAC-Neutral Test (D5) X Sphagnum moss (D8) (LRR T, U)			
			_	Other (Expla	III III Remarks	<u>-</u>	Орпа		(DO) (EIX	
Field Observations:				N						_
Surface water preser	_		No	X Depth	· · · · · · · · · · · · · · · · · · ·		Wet	land hydro	ology pre	esent?
Water table present?	_		No	X Depth	· -			v		
Saturation present?	Yes _	Х	No	Depth	(inches)		Yes _	<u>X</u>	No _	
(includes capillary fri							26 211			
Describe recorded da	ata (stream gaug	e, monito	ring w	vell, aerial ph	iotos, previou	s inspections),	if availat	ne:		
Remarks:										

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 77 **Dominance Test Worksheet** Absolute Dominant Indicator Tree Stratum (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **25** x 1 = 20% of total cover: **FACW** species 50% of total cover: 0 x 2 =0 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species x 3 = 258 FACU species 15 60 x 4 = UPL species 0 x 5 = 0 Column totals **126** (A) **343** (B) Prevalence Index = B/A = 2.72 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation **X** 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0 and at least 80% = Total Cover X of total cover has indicator status* 50% of total cover: 20% of total cover: 4 - Morphogical adaptations* (provide (Plot size: 1m² Herb Stratum supporting data in Remarks or on a separate sheet) 1 Andropogon virginicus **FAC** Problematic hydrophytic vegetation* Gratiola neglecta 25 OBL (explain) Jacquemontia tamnifolia 15 3 **FACU** Senecio hieraciifolius **FAC** *Indicators of hydric soil and wetland hydrology must be Hypericum hypericoides **FAC** present, unless disturbed or problematic **Definitions of Four Vegetation Strata:** 7 Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall 126 = Total Cover Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: **25.2** Woody Vine Stratum (Plot size: 15-m radius) Woody Vine – All woody vines greater than 3.28 ft 5 Hydrophytic = Total Cover vegetation Yes X No 20% of total cover: present? 50% of total cover: Remarks: (Include photo numbers here or on a separate sheet)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix		Redo	edox Features						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 2	10YR 5/2	80	10YR 5/6	20	С	М	silty clay loam			
2 - 6	10YR 5/1	43	10YR 5/6	15	C	М	silty clay loam			
	10YR 4/2	42								
6 - 12	10YR 5/2	85	10YR 5/8	15	С	М	sandy clay loam			
¹ Type: C = 0	Concentration, D = D	epletion, RM	I = Reduced Matrix, N	MS = Mask	ed Sand	Grains	s. ² Location: PL = Pc	ore Lining, M = Matrix		
Hydric Soil	Indicators:		Polyvalue Below	Surface (S8)		Indicators for Problem	natic Hydric Soils ³ :		
Histisol	(A1)	-	(LRR S, T, U)		•		1 cm Muck (A10) (L	RR O)		
Histic E	pipedon (A2)	-	Thin Dark Surfac			-	2 cm Muck (A10) (L	.RR S)		
	istic (A3)	-	Loamy Mucky Mi		(LRR O)		Reduced Vertic (F1	•		
_ ' '	en Sulfide (A4)	-	Loamy Gleyed M	, ,			(outside MLRA 150	DA, B)		
	d Layers (A5)	· -	Depleted Matrix	` '			Piedmont Floodplai	n Soils (F19)		
	: Bodies (A6) (LRR P ucky Mineral (A7) (L l	-	Redox Dark Surf Depleted Dark S		١		(LRR P, S, T)	—·		
	resence (A8) (LRR L		X Redox Depression	7 indinated Bright Edamy Cone (1)						
	uck (A9) (LRR P. T)	·	Marl (F10) (LRR				Red Parent Materia	I (TF12)		
	d Below Dark Surfac	e (A11)	Depleted Ochric	•	RA 151)		Very Shallow Dark	· ·		
Thick D	ark Surface (A12)	•	Iron-Manganese	Masses (F	12)		Other (explain in re	• •		
Coast P	Prairie Redox (A16)	-	(LRR O, P, T) Umbric Surface (·					
	Mucky Mineral (S1)	-	Delta Ochric (F1							
(LRR O	• • •	-	Reduced Vertic (-	150E	³ Indicators of hydro			
Sandy 0	Gleyed Matrix (S4)	-	Piedmont Floodp	and weltand hydrology must be odplain Soils (F19) (MLRA 149A) present, unless disturbed or						
Sandy F	Redox (S5)	-	—— Anomalous Brigh	right Loamy Soils (F20) problematic						
Stripped	d Matrix (S6)	-	(MLRA 149A, 15	53C, 153D))					
Dark Su	ırface (S7) (LRR P, \$	S, T, U)								
Restrictive	Layer (if observed)	•								
Туре:	_ayo: (oboo! voa)	•								
Depth (inche	es):			Hydric soi	l present	t?	Yes X	No		
D										
Remarks:										

Project/Site	Moro Creek M	itigation Bar	nk	City/County:	Bunn	Sam	npling Date:	2018/10/09		
Applicant/Owner:	Arkansas	Department of	of Transp	ortation State:	AR	Sam	pling Point:	Plot 78		
Investigator(s):	Kayti	Ewing, Joe	Ledvina	Section	on, Township,	Range:	T8S	R14W S24		
Landform (hillslope	, terrace, etc.):		none	Local re	elief (concave,	, convex, nor	ne):	none		
Slope (%): 0	Lat:			Long:		Datu	um:	WGS84		
Soil Map Unit Name	e	Wehadl	kee silt lo	am	NWI Cla	assification:		PFO1A		
Are climatic/hydrolo	ogic conditions o	of the site typi	cal for this	time of the year? Y	es X No		(If no, explair	n in remarks)		
Are vegetation	, soil	, or hyd	lrology	significantly distu	urbed?	Are "normal	circumstance	es" present?		
Are vegetation	, soil	, or hyd	lrology	naturally problen	natic?	Yes	X	No		
						(If needed, e	xplain any a	nswers in Remarks.)		
		ich site map	showing	sampling point l	ocations, tra	nsects, imp	ortant feat	ures, etc.		
Hydrophytic vegeta	-		X No							
Hydric soil present		Yes	X No	Is the sam						
Wetland hydrology	present?	Yes	X No	within a we	etland?	Yes	X 1	No		
Remarks: (Explain	alternative proc	edures here c	or in a sepa	arate report.)						
HYDROLOGY										
Wetland Hydrolog	y Indicators:				S	econdary Ind	licators (mini	mum of two required)		
Primary Indicators	(minimum of one	e is required;	check all t	hat apply)	•	Surface	Soil Cracks (E	36)		
Surface Water (A1)		Aqua	tic Fauna (B13)		Sparsely	Vegetated C	oncave Surface (B8)		
High Water Table (A2)			Marl	Deposits (B15) (LRI	Drainage Patterns (B10) Sulfide Odor (C1) Drainage Patterns (B10) Moss Trim Lines (B16) Drainage Patterns (B20)					
Saturation (A3)		Hydro	ogen Sulfide Odor (C	1)						
Water Marks (B	1)		Oxidi	zed Rhizospheres on	Living .	Crayfish Burrows (C8)				
Sediment Depos	sits (B2)			s (C3)		Moss Trim Lines (B16) Dry-Season Water Table (C2)				
Drift Deposits (E	33)		Prese	ence of Reduced Iron	(C4)	Saturatio	n Visible on A	Aerial Imagery (C9)		
Algal Mat or Cru	ıst (B4)		Rece	nt Iron Reduction in T	illed .	X Geomorp	ohic Position ((D2)		
Iron Deposits (B	55)		Soils	(C6)		Shallow	Aquitard (D3)			
Inundation Visib	ole on Aerial Imag	jery (B7)	Thin I	Muck Surface (C7)		X FAC-Neutral Test (D5)				
Water-Stained L	eaves (B9)		Other	(Explain in Remarks) _	Sphagnum moss (D8) (LRR T, U)				
Field Observation	s:									
Surface water pres		N	No X	Depth (inches)		Wetlan	nd hydrology	y present?		
Water table presen	it? Yes			Depth (inches)			, ,,	•		
Saturation present?	? Yes			Depth (inches)		Yes X	C No	o		
(includes capillary f	fringe)									
Describe recorded	data (stream ga	uge, monitori	ing well, a	erial photos, previou	s inspections)	, if available:				
Remarks:	Remarks:									
I										

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 78 **Dominance Test Worksheet** Absolute Dominant Indicator **Tree Stratum** (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) 1 None that are OBL, FACW, or FAC: 2 **Total Number of Dominant** 3 Species Across all Strata: (B) Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **95** x 1 = 20% of total cover: **FACW** species 50% of total cover: 0 x 2 =0 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species x 3 = 1 None FACU species 0 x 4 =UPL species 2 x 5 = 0 Column totals **118** (A) **164** (B) 3 Prevalence Index = B/A = 1.39 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation **X** 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0 and at least 80% = Total Cover X of total cover has indicator status* 50% of total cover: 20% of total cover: 4 - Morphogical adaptations* (provide (Plot size: 1m² Herb Stratum supporting data in Remarks or on a separate sheet) 1 Gratiola neglecta OBL Problematic hydrophytic vegetation* Andropogon virginicus 20 **FAC** (explain) Senecio hieraciifolius 2 **FAC** *Indicators 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) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall = Total Cover Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: **23.4** (Plot size: 15-m radius) Woody Vine Stratum Rubus laudatus Woody Vine – All woody vines greater than 3.28 ft Vitis rotundifolia **FAC** 3 4 5 Hydrophytic 2 = Total Cover vegetation Yes X No___ 20% of total cover: **0.4** present? 50% of total cover: Remarks: (Include photo numbers here or on a separate sheet)

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the inc	dicator o	r conf	irm the absence of ind	icators.)			
Depth	Matrix		Redo	x Features	S						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 3	10YR 5/1	59	10YR 3/6	2	С	М	silty clay loam				
	10YR 4/2	39					<u> </u>				
3 - 6	10YR 4/2	38	10YR 6/8	2	С	М	silty clay loam				
	10YR 5/1	58	10YR 3/6	2	С	М					
6 - 12	10YR 5/1	80	10YR 4/6	10	С	М	silty clay loam				
V	10111071		10YR 3/6	10	С	M	only olay loani				
			10110 3/0	10		171					
1 _{Tyme} , C = (Concentration D = D	anlation DN	1 - Dadwaad Matrix N	MC - Maak	rad Cand	Crains	21 coetion: D1 = D	ara Lining M - Matrix			
		epielion, Riv	1 = Reduced Matrix, N			Giailis		ore Lining, M = Matrix			
Histisol	Indicators:		Polyvalue Below	Surface (S	S8)		1 cm Muck (A10) (I	•			
	pipedon (A2)	•	(LRR S, T, U) Thin Dark Surfac	oo (SO) (I E	реті	IV.	2 cm Muck (A10) (I	•			
	istic (A3)	•	Loamy Mucky Mi			-					
	en Sulfide (A4)	-	Loamy Gleyed M		(-:\:\\ \\)		Reduced Vertic (F1 (outside MLRA 15				
<u> </u>	d Layers (A5)	•	X Depleted Matrix	, ,							
	Bodies (A6) (LRR P	T II)	Redox Dark Surf	` '			Piedmont Floodplai (LRR P, S, T)	n Soils (F19)			
	ucky Mineral (A7) (Li		Depleted Dark S)			comy Coile (F20)			
	resence (A8) (LRR L		Redox Depression	· ·	,		Anomalous Bright L (MLRA 153B)	.oamy Solis (F20)			
	uck (A9) (LRR P. T)	•	Marl (F10) (LRR	` '			Red Parent Materia	al (TF12)			
	d Below Dark Surfac	e (A11)	Depleted Ochric	•	RA 151)		Very Shallow Dark				
	ark Surface (A12)	- (* * * * * * * * * * * * * * * * * * *	' Iron-Manganese		-		Other (explain in re				
	rairie Redox (A16)		(LRR O, P, T)	Masses (I	12)			,			
(MLRA		•	Umbric Surface ((F13) (LRF	R P, T, U)						
	Mucky Mineral (S1)	•	Delta Ochric (F1								
(LRR O		•	Reduced Vertic ((F18) (MLF	RA 150A,	150E	³ Indicators of hydro				
Sandy 0	Gleyed Matrix (S4)	•	Piedmont Floodp	olain Soils	(F19) (M l	-RA 14	and weitand nydroi 19 A) present unless dist	and weltand hydrology must be oresent, unless disturbed or			
Sandy F	Redox (S5)	•		Bright Loamy Soils (F20) problematic							
Stripped	d Matrix (S6)		(MLRA 149A, 15			,					
Dark Su	ırface (S7) (LRR P, S	S, T, U)									
Dootrictive	Laver (if about ad)										
	Layer (if observed)	•									
Type: Depth (inche	e).			Hydric soi	l nroson	12	Yes X	No			
Dopui (mon				ilyunic 30i	i present			<u> </u>			
Remarks:											

Project/Site	Moro Creek Miti	gation E	3ank		City/	County:	Bunn	Samplin	ng Date:	2018/10/09			
Applicant/Owner:				ranspo	-				_	Plot 79			
Investigator(s):	Kayti E							, Range:	T8S R	14W S24			
Landform (hillslope,	terrace, etc.):		no	one		Local re	elief (concave	e, convex, none):		none			
Slope (%): 0	Lat:					Long:		Datum:		WGS84			
Soil Map Unit Name		Weha	adkee	silt loa	m			lassification:		PFO1A			
Are climatic/hydrolog	gic conditions of t	he site t	ypical f	for this f	time c	of the year? Yo	es X No) (If n	o, explain	in remarks)			
Are vegetation	, soil	, or h	nydrolo	gy	sig	nificantly distu	ırbed?	Are "normal circ	umstances	" present?			
Are vegetation	, soil	, or h	nydrolo [,]	gy	nat	turally problem	natic?	Yes >	<u>K</u> N	٥			
								(If needed, expla	ain any ans	swers in Remarks.)			
SUMMARY OF FIN					ī	pling point le	ocations, tr	ansects, import	ant featu	es, etc.			
Hydrophytic vegetati	on present?	Yes_		No_									
Hydric soil present?		Yes_		No_	<u> </u>	Is the samp							
Wetland hydrology p	resent?	Yes_	X	No_		within a we	tland?	Yes	N	oX			
LIVER DOLLOW													
HYDROLOGY	. In all a stance												
Wetland Hydrology				-111 41-	-4	I\	5	-		um of two required)			
Primary Indicators (minimum of one is required; check all that ap								Surface Soil Cracks (B6)					
Surface Water (A1)				_		na (B13)				ncave Surface (B8)			
· · · · · · · · · · · · · · · ·				-	its (B15) (LRF	•	Drainage Pa)				
X Saturation (A3) Hydrogen S				gen Sı	ulfide Odor (C1	1)	Moss Trim L						
Water Marks (B1						izospheres on	Living	Dry-Season		e (C2)			
Sediment Deposi				Roots	` '			Crayfish Bur					
Drift Deposits (B3				Presence of Reduced Iron (C4)			(C4)	Saturation Visible on Aerial Imagery (C9)					
Algal Mat or Crus	•			Recent Iron Reduction in Tilled			illed	X Geomorphic Position (D2)					
Iron Deposits (B5	•	(5-1)		Soils (Shallow Aquitard (D3)				
	e on Aerial Imager	y (B7)		-		Surface (C7)	· · · · · · · · · · · · · · · · · · ·		FAC-Neutral Test (D5)				
Water-Stained Le	aves (B9)			Other ((Expla	ain in Remarks)	X Sphagnum moss (D8) (LRR T, U)					
Field Observations	:												
Surface water prese	nt? Yes _		No	<u>X</u> [)epth	(inches)		Wetland h	ydrology	present?			
Water table present	? Yes _		No		-	(inches)							
Saturation present?	Yes _	X	No)epth	(inches)	_	Yes X	No				
(includes capillary fri													
Describe recorded d	ata (stream gaug	∤e, monit	oring w	vell, aer	rial ph	notos, previou	s inspections	s), if available:					
Remarks:													

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 79 **Dominance Test Worksheet** Absolute Dominant Indicator Tree Stratum (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** Species Across all Strata: (B) Percent of Dominant Species that are OBL, FACW, or FAC: **50.00%** (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species 3 x 1 = 20% of total cover: 50% of total cover: **FACW** species 1 x 2 =Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species x 3 = 1 Liquidambar styraciflua FACU species 8 **FAC** x 4 =Symplocos tinctoria **FAC** UPL species x 5 = 0 Carya alba 2 Column totals **26** (A) 73 (B) llex opaca 1 **FAC** Prevalence Index = B/A = 2.81 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0 and at least 80% = Total Cover of total cover has indicator status* 50% of total cover: 20% of total cover: 1.4 4 - Morphogical adaptations* (provide Herb Stratum (Plot size: supporting data in Remarks or on a separate sheet) 1 Lespedeza repens Problematic hydrophytic vegetation* Dichanthelium dichotomum **FAC** (explain) 3 Senecio hieraciifolius 3 Ν **FAC** Gratiola neglecta 3 Ν OBL 4 *Indicators of hydric soil and wetland hydrology must be Eupatorium serotinum **FAC** present, unless disturbed or problematic **FAC Definitions of Four Vegetation Strata:** Andropogon virginicus Ν Rhexia mariana 1 Ν **FACW** Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), Eupatorium capillifolium 1 **FACU** regardless of height. Solanum carolinense **FACU** 9 Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or 11 equal to 3.28 ft (1 m) tall Herb - All herbaceous (non-woody) plants, = Total Cover regardless of size, and woody plants less than 3.28 50% of total cover: 35.5 20% of total cover: **14.2** Woody Vine Stratum (Plot size: 15-m radius) Rubus laudatus Woody Vine – All woody vines greater than 3.28 ft 2 3 4 5 Hydrophytic = Total Cover vegetation 20% of total cover: 0.2 present? Yes No X 50% of total cover: 0.5 Remarks: (Include photo numbers here or on a separate sheet) plot includes 20% cover of sphagnum

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r confi	irm the absence of i	ndicators.)		
Depth	Matrix		Redo	ox Feature	s					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 2	10YR 3/2	90					silty clay loam	contrast faint for F7		
	10YR 4/3	10								
2 - 4	10YR 5/3	49	10YR 5/6	2	С	М	silty clay loam			
	10YR 6/3	49					,,			
4 - 12	10YR 6/3	98	10YR 5/6	2	С	М	silty clay loam			
	10111070		10111070							
1 _{Tyma} , C = (Concentration D = D	anlation DM	L - Dadwaad Matrix	MC - Mas	lead Cand	Oraina	21 acation, DI =	- Dare Lining M - Metrix		
		repletion, Riv	I = Reduced Matrix,			Grains		Pore Lining, M = Matrix		
Histisol	Indicators:		Polyvalue Below	/ Surface (S8)		1 cm Muck (A10	lematic Hydric Soils ³ :		
	pipedon (A2)	-	(LRR S, T, U) Thin Dark Surface	00 (80) (1.1	рреті	IV.	2 cm Muck (A10			
	istic (A3)	-	Loamy Mucky M			-				
	en Sulfide (A4)	-	Loamy Gleyed N	` '	, (LIXIX O)		Reduced Vertic (outside MLRA			
	d Layers (A5)	-	Depleted Matrix							
	Bodies (A6) (LRR P	. T II)	Redox Dark Sur	` '			Piedmont Floodp (LRR P, S, T)	olain Soils (F19)		
	ucky Mineral (A7) (L l	-	Depleted Dark S	, ,	7)		 `	ht Laamy Caila (F20)		
	resence (A8) (LRR L	-	Redox Depressi	•	,		(MLRA 153B)	ht Loamy Soils (F20)		
	uck (A9) (LRR P. T)	•	Marl (F10) (LRR	. ,			Red Parent Mate	erial (TF12)		
	d Below Dark Surfac	e (A11)	Depleted Ochric	,	.RA 151)			ark Surface (TF12)		
	ark Surface (A12)	-	' Iron-Manganese		-		Other (explain in			
	rairie Redox (A16)		(LRR O, P, T)	, iviasses (1 12)			,		
(MLRA		-	Umbric Surface	(F13) (LR I	R P, T, U))				
	Mucky Mineral (S1)	-	— Delta Ochric (F1							
(LRR O		•	Reduced Vertic	(F18) (ML	RA 150A,	150E		³ Indicators of hydrophytic vegetation and weltand hydrology must be A) present, unless disturbed or		
Sandy 0	Gleyed Matrix (S4)	-	Piedmont Flood	plain Soils	(F19) (MI	LRA 14	and weitand nyd 19 A) present juniess (
Sandy F	Redox (S5)	-	—— Anomalous Brigl				problematic			
Stripped	d Matrix (S6)		(MLRA 149A, 1			,				
Dark Su	ırface (S7) (LRR P, S	S, T, U)								
D t i . ti	1 (°C - 1 1)	·-	T							
	Layer (if observed)):								
Type: Depth (inche	e).			Hydric so	il procon	+2	Yes	No X		
Deptil (illicit				riyuric so	ii preseii	l i		NO X		
Remarks:										

Project/Site	Moro Creek I	Mitigation Ba	nk	City/	County:	Bunn	S	ampling Dat	te: 2018/10/09			
Applicant/Owner:	Arkansas	Department	of Trans		n State:		Sa	ampling Poir	nt: Plot 80			
Investigator(s):	Kay	ti Ewing, Joe	Ledvin	а	Section	ı, Township, I	Range:	Т	8S R14W S24			
Landform (hillslope	, terrace, etc.):		none)	Local reli	ief (concave,	convex, r	none):	none			
Slope (%): 0	Lat:				Long:		D	atum:	WGS84			
Soil Map Unit Name	e	Wehad	dkee silt	loam		NWI Cla	ssification	n:	PFO1A			
Are climatic/hydrolo	gic conditions	of the site typ	oical for t	his time c	of the year? Yes	s <u>X</u> No		(If no, exp	plain in remarks)			
Are vegetation	, soil	, or hy	drology_	sig	nificantly distur	bed?	Are "norm	nal circumsta	ances" present?			
Are vegetation	, soil	, or hy	drology_	nat	urally problema	atic?	Υe	es <u>X</u>	No			
						(If needed	l, explain an	y answers in Remarks.)			
SUMMARY OF FI		ach site ma	p showi	ing sam	oling point lo	cations, trar	nsects, i	mportant f	eatures, etc.			
Hydrophytic vegeta	-	Yes		10								
Hydric soil present?		Yes		10	Is the sampl							
Wetland hydrology	present?	Yes_	<u>X</u> N	10	within a wet	land?	Yes_	<u> </u>	No			
Remarks: (Explain	·			•	,							
HYDROLOGY												
Wetland Hydrolog	=					Se	condary	Indicators (n	minimum of two required)			
Primary Indicators ((minimum of o	ne is required	; check a	all that ap	ply)	_	Surface Soil Cracks (B6)					
Surface Water (A1)				uatic Fau	na (B13)	_	Spars	ely Vegetate	d Concave Surface (B8)			
High Water Table (A2)				arl Depos	its (B15) (LRR	U) _	Draina	age Patterns	(B10)			
Saturation (A3)				drogen Sı	ulfide Odor (C1)	_	Moss	Trim Lines (E	316)			
Water Marks (B1)			Ox	idized Rh	izospheres on L	iving _	Dry-S	eason Water	Table (C2)			
Sediment Depos				oots (C3)		_		sh Burrows (
Drift Deposits (B	33)		Pre	esence of	Reduced Iron (_			on Aerial Imagery (C9)			
Algal Mat or Cru				Recent Iron Reduction in Tilled			X Geomorphic Position (D2)					
Iron Deposits (B	-			Soils (C6)			Shallow Aquitard (D3)					
Inundation Visib		igery (B7)		Thin Muck Surface (C7)			X FAC-Neutral Test (D5)					
Water-Stained L	eaves (B9)		Ot	her (Expla	in in Remarks)		Sphagnum moss (D8) (LRR T, U)					
Field Observations	s:											
Surface water prese	ent? Yes	s	No	C Depth	(inches)	_	Wet	land hydrol	logy present?			
Water table present	t? Yes	s	No	C Depth	(inches)	_						
Saturation present?	Ye:	š	No	C Depth	(inches)	_	Yes _	X	No			
(includes capillary f	ringe)											
Describe recorded	data (stream g	auge, monito	ring well,	aerial ph	otos, previous	inspections),	if availab	le:				
Remarks:												

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 80 **Dominance Test Worksheet** Absolute Dominant Indicator % Cover Tree Stratum (Plot size: 30-m radius) Species Staus **Number of Dominant Species** 1 that are OBL, FACW, or FAC: (A) 3

2				Total Number of Dominant
3				Species Across all Strata: (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC:(A/B)
6				
7				Prevalence Index Worksheet
8		 .		Total % Cover of:
FOO/ of total anyon	200/	_= Total Cover o of total cover:		OBL species 3 x 1 = 3
50% of total cover: Sapling/Shrub Stratun (Plot size: 15-m radius)	20%	o or total cover:		FACW species 100 x 2 = 200 FAC species 27 x 3 = 81
1 Symplocos tinctoria	15	Υ	FAC	FACU species 21 x 4 = 84
2 Ilex opaca	10	_ <u> </u>	FAC	UPL species
3 Quercus phellos	1	_ <u> </u>	FACW	Column totals 151 (A) 368 (B)
4 Carya alba	1	_ <u>N</u>	IACVV	Prevalence Index = B/A = 2.44
5				Hydrophytic Vegetation Indicators:
6		- -		1 - Rapid test for hydrophytic vegetation
7		 ·		X 2 - Dominance test is >50%
8				3 - Prevalence index is ≤3.0 and at least 80%
-	27	= Total Cover		X of total cover has indicator status*
50% of total cover: 13.5	20%	of total cover:		4 - Morphogical adaptations* (provide
Herb Stratum (Plot size: 1m ²)		•		supporting data in Remarks or on a
1 Panicum verrucosum	90	Υ	FACW	separate sheet)
2 Jacquemontia tamnifolia	15		FACU	Problematic hydrophytic vegetation*
3 Solidago gigantea	8	N	FACW	(explain)
4 Phytolacca americana	5	N	FACU	*Indicators of hydric soil and wetland hydrology must be
5 Lespedeza repens	4	<u>N</u>		present, unless disturbed or problematic
6 Persicaria hydropiperoides	3	N	OBL	Definitions of Four Vegetation Strata:
7 Lespedeza cuneata	1	N	FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8 Boehmeria cylindrica	11	N	FACW	or more in diameter at breast height (DBH),
9				regardless of height.
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall
12				, ,
FOO/ of total across 62 F	127	_= Total Cover of total cover:		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28
50% of total cover: 63.5 Woody Vine Stratum (Plot size: 15-m radius)		o or total cover:	25.4	ft tall
1 Vitis rotundifolia	2	N	FAC	Woody Vine – All woody vines greater than 3.28 ft
2 Rubus laudatus	1		1 70	in height.
3	•	 -		
4				
5				
6				Hydrophytic
	3	= Total Cover		vegetation
50% of total cover: 1.5	20%	of total cover:	0.6	present? Yes X No
	_	•		
Remarks: (Include photo numbers here or on a separate	e sheet)			•

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the inc	dicator o	r confi	rm the absence of i	ndicators.)		
Depth	Matrix		Rede	ox Features	S					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 6	10YR 3/2	98	10YR 3/6	2	С	М	silty clay loam			
6 - 12	10YR 3/2	88	10YR 3/6	2	С	M	silty clay loam			
	10YR 4/2	10								
¹ Type: C = 0	Concentration, D = D	epletion. RM	I = Reduced Matrix.	MS = Mask	ced Sand	Grains	Location: PL =	Pore Lining, M = Matrix		
	Indicators:		Polyvalue Below					ematic Hydric Soils ³ :		
Histisol			(LRR S, T, U)	V Surface (30)		1 cm Muck (A10)	-		
	pipedon (A2)	=	Thin Dark Surfa	ce (S9) (LF	RR S, T, L	J) .	2 cm Muck (A10)	, ,		
Black H	listic (A3)	=	 Loamy Mucky M			-	Reduced Vertic (
Hydroge	en Sulfide (A4)	-	Loamy Gleyed N	Matrix (F2)			(outside MLRA	• •		
Stratifie	d Layers (A5)	-	X Depleted Matrix	(F3)		-	Piedmont Floodp	plain Soils (F19)		
Organic	Bodies (A6) (LRR P	P, T, U)	Redox Dark Sur	face (F6)		_	(LRR P, S, T)	,		
5 cm M	ucky Mineral (A7) (L l	RR P, T, U)	Depleted Dark S	Surface (F7) Anomalous Bright Loamy Soils (F20)						
Muck P	resence (A8) (LRR L	J) _	Redox Depressi	ons (F8)		_	(MLRA 153B)			
1 cm M	uck (A9) (LRR P. T)	_	Marl (F10) (LRR	R U)			Red Parent Mate	erial (TF12)		
Deplete	d Below Dark Surfac	e (A11)	Depleted Ochric	(F11) (ML	RA 151)		Very Shallow Da	rk Surface (TF12)		
Thick D	ark Surface (A12)		Iron-Manganese	Masses (F	- 12)	-	Other (explain in	remarks)		
Coast F	Prairie Redox (A16)	-	(LRR O, P, T)							
(MLRA	150A)	=	Umbric Surface)				
	Mucky Mineral (S1)	_	Delta Ochric (F1		-		³ Indicators of hw	³ Indicators of hydrophytic vegetation and weltand hydrology must be		
(LRR O	-	-	Reduced Vertic				and weltand hyd			
	Gleyed Matrix (S4)	-	Piedmont Flood	plain Soils	(F19) (MI	_RA 14	A) present, unless disturbed or problematic			
	Redox (S5)		Anomalous Brig	-))				
	d Matrix (S6)	- -	(MLRA 149A, 1	53C, 153D)					
Dark St	urface (S7) (LRR P, \$	5, 1, 0)								
Restrictive	Layer (if observed)):								
Type:										
Depth (inch	es):			Hydric soi	l presen	t?	Yes X	No		
Remarks:			<u> </u>							
i temants.										

Project/Site	Moro Creek Mitigation Bank City/0			/County:	Bunn	_Sampling Date	e: 2018/10/09			
Applicant/Owner:	Arkansas Der	Arkansas Department of Transportation		on State:	AR	Sampling Poin	t: Plot 81			
Investigator(s):	Kayti Ev	wing, Joe Le	edvina	Section, T	Section, Township, Range: T8S R14W S24					
Landform (hillslope	, terrace, etc.):		none	Local relief	(concave, conve	x, none):	none			
Slope (%): 0	Lat:			Long:		Datum:	WGS84			
Soil Map Unit Name	e	Wehadke	ee silt loam		NWI Classifica	ition:	PFO1A			
Are climatic/hydrolo	ogic conditions of the	ne site typica	al for this time o	of the year? Yes _	X No	_ (If no, exp	lain in remarks)			
Are vegetation						ormal circumsta	nces" present?			
Are vegetation	, soil	, or hydro	ologynat	turally problematic		Yes X	No			
					•		y answers in Remarks.)			
SUMMARY OF FI				pling point locat	ions, transects	s, important fe	atures, etc.			
Hydrophytic vegeta	-	Yes X								
Hydric soil present?		Yes X		Is the sampled						
Wetland hydrology	present?	Yes X	No	within a wetlan	d? Yes	s	No			
Remarks: (Explain	· 		·							
HYDROLOGY										
Wetland Hydrolog	_				Seconda	ary Indicators (m	ninimum of two required)			
Primary Indicators (minimum of one is	required; cl	neck all that ap	ply)	Su	ırface Soil Cracks	s (B6)			
Surface Water (A1)	Aquatic Fau			arsely Vegetated	d Concave Surface (B8)				
High Water Table (A2)			Marl Depos	sits (B15) (LRR U)	Dra	ainage Patterns ((B10)			
X Saturation (A3)				ulfide Odor (C1)	Mo	oss Trim Lines (B	16)			
Water Marks (B1)				nizospheres on Livin	ıg <u> </u>	y-Season Water	Table (C2)			
Sediment Depos		_	Roots (C3)			ayfish Burrows (0	•			
Drift Deposits (B	-	_	Presence of	f Reduced Iron (C4)			on Aerial Imagery (C9)			
Algal Mat or Cru	, ,			Reduction in Tilled		X Geomorphic Position (D2)				
Iron Deposits (B	•	_	Soils (C6)			Shallow Aquitard (D3)				
	le on Aerial Imagery	/ (B7) _		Surface (C7)		.C-Neutral Test (D5)				
Water-Stained L	.eaves (B9)	_	Other (Expla	ain in Remarks)	Sp	Sphagnum moss (D8) (LRR T, U)				
Field Observations	s:									
Surface water prese	ent? Yes _	No.	X Depth	(inches)	W	Vetland hydrolo	ogy present?			
Water table present	t? Yes _	No.	X Depth	(inches)						
Saturation present?	Yes _	X No	Depth	(inches)	Yes	X	No			
(includes capillary f	ringe)									
Describe recorded	data (stream gauge	e, monitorino	g well, aerial ph	notos, previous ins	pections), if avai	ilable:				
Remarks:										

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 81 **Dominance Test Worksheet** Absolute Dominant Indicator Tree Stratum (Plot size: 30-m radius) % Cover Species Staus **Number of Dominant Species** (A) that are OBL, FACW, or FAC: **Total Number of Dominant** (B) Species Across all Strata: Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B) **Prevalence Index Worksheet** Total % Cover of: = Total Cover OBL species **0** x 1 = 20% of total cover: **FACW** species 50% of total cover: **106** x 2 = 212 Sapling/Shrub Stratun (Plot size: 15-m radius) FAC species **34** x 3 = 1 Diospyros virginiana FACU species **FAC** x 4 = **FAC** UPL species llex opaca x 5 = 0 Liquidambar styraciflua 3 Ν **FAC** Column totals **141** (A) **318** (B) Quercus nigra 1 Ν **FAC** Prevalence Index = B/A = 2.26 **Hydrophytic Vegetation Indicators:** 1 - Rapid test for hydrophytic vegetation **X** 2 - Dominance test is >50% 3 - Prevalence index is ≤3.0 and at least 80% = Total Cover 19 X of total cover has indicator status* 50% of total cover: 9.5 20% of total cover: 3.8 4 - Morphogical adaptations* (provide Herb Stratum (Plot size: supporting data in Remarks or on a separate sheet) 1 Panicum verrucosum 100 **FACW** Problematic hydrophytic vegetation* 10 **FAC** 2 llex opaca (explain) Dichanthelium dichotomum 3 5 **FAC** Boehmeria cylindrica Ν **FACW** *Indicators of hydric soil and wetland hydrology must be Oldenlandia uniflora **FACW** present, unless disturbed or problematic Eupatorium capillifolium **Definitions of Four Vegetation Strata: FACU** Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding 10 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall = Total Cover Herb - All herbaceous (non-woody) plants, 122 regardless of size, and woody plants less than 3.28 50% of total cover: 20% of total cover: **24.4** Woody Vine Stratum (Plot size: 15-m radius) Woody Vine – All woody vines greater than 3.28 ft 5 Hydrophytic = Total Cover vegetation Yes X No ____ 20% of total cover: present? 50% of total cover: Remarks: (Include photo numbers here or on a separate sheet)

Profile Des	cription: (Describe	to the dept	h needed to docum	ent the in	dicator o	r confi	irm the absence of ind	icators.)		
Depth	Matrix		Redo	ox Feature:	s					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 3	10YR 4/1	49	10YR 5/6	2	С	PL	silty clay loam			
	10YR 4/3	49								
3 - 9	10YR 5/2	98	10YR 5/6	2	С	М	silty clay loam			
9 - 12	10YR 4/3	98	10YR 5/8	2	С	М	silty clay loam			
¹ Type: C = 0	Concentration, D = D	epletion. RM	I = Reduced Matrix. I	⊥ MS = Masł	⊥ ked Sand	Grains	s. ² Location: PL = P	ore Lining, M = Matrix		
	Indicators:	,	Polyvalue Below				Indicators for Problem			
Histisol			(LRR S, T, U)	ouriace (36)		1 cm Muck (A10) (I	-		
	pipedon (A2)	-	Thin Dark Surfac	ce (S9) (LF	RR S, T, L	J)	2 cm Muck (A10) (I			
Black H	istic (A3)	-	 Loamy Mucky M				Reduced Vertic (F1			
Hydroge	en Sulfide (A4)	-	Loamy Gleyed N	/latrix (F2)			(outside MLRA 15			
Stratifie	d Layers (A5)		X Depleted Matrix	(F3)		·	—— Piedmont Floodpla	in Soils (F19)		
Organic	Bodies (A6) (LRR P	P, T, U)	Redox Dark Sur	face (F6)			(LRR P, S, T)	, ,		
5 cm Mi	ucky Mineral (A7) (L l	RR P, T, U)	Depleted Dark S	The maid as Bright Learny Cons (1 20)						
	resence (A8) (LRR L	J) _	Redox Depressi	` '			(MLRA 153B)			
_	uck (A9) (LRR P. T)	-	Marl (F10) (LRR	•		•	Red Parent Materia			
	d Below Dark Surfac	e (A11)	Depleted Ochric	(F11) (ML	RA 151)	·	Very Shallow Dark	·		
Thick D	ark Surface (A12)		Iron-Manganese	Masses (F	F12)	•	Other (explain in re	emarks)		
	Prairie Redox (A16)	-	(LRR O, P, T)	(E40) (I DE						
(MLRA	-	-	Umbric Surface							
Sandy N (LRR O	Mucky Mineral (S1)	-	Delta Ochric (F1 Reduced Vertic		-	1505	³ Indicators of hydro	³ Indicators of hydrophytic vegetation and weltand hydrology must be A) present, unless disturbed or problematic		
— `	Gleyed Matrix (S4)	-					and weltand hydrol			
·	Redox (S5)	-								
	d Matrix (S6)		Anomalous Brigl (MLRA 149A, 1			')	problemate			
	ırface (S7) (LRR P, \$	s, T, U)			,					
_			T							
	Layer (if observed)	:								
Type:	\-			Hydric soi			Van V	No		
Depth (inch	es):			nyaric soi	n presen		Yes X	No		
Remarks:										

Project/Site	Moro Creek Mitigation Bank City/0			County:	Bunn	Sampling	Date: 2	018/10/09		
Applicant/Owner:	Arkansas Dep	Arkansas Department of Transportation		n State:	AR	Sampling	Point:	Plot 82		
Investigator(s):	Kayti Ew	ring, Joe Led	lvina	Section, Township, Range: T8S R14W S24						
Landform (hillslope	, terrace, etc.):	n	one	Local relief	(concave, con	ivex, none):	no	ne		
Slope (%): 0	Lat:			Long:		Datum:	WG	S84		
Soil Map Unit Name	e	Wehadkee	silt loam		NWI Classif	ication:	PFO1	Α		
Are climatic/hydrolo	ogic conditions of th	e site typical	for this time of	of the year? Yes _	X No	(If no,	, explain in rem	narks)		
Are vegetation	, soil	, or hydrolo	ogysigi	nificantly disturbe	d? Are	"normal circur	mstances" pres	sent?		
Are vegetation	, soil	, or hydrolo	ogynat	urally problemation		Yes X	_			
					•		n any answers	•		
SUMMARY OF FI			owing samp	oling point locat	tions, transe	cts, importai	nt features, e	etc.		
Hydrophytic vegeta	*	Yes X	No							
Hydric soil present?		Yes X	No	Is the sampled						
Wetland hydrology	present?	Yes X	No	within a wetlan	1d? \	Yes X	No			
Remarks: (Explain			·							
HYDROLOGY										
Wetland Hydrolog	· -				Secor	ndary Indicator	rs (minimum of	f two required)		
Primary Indicators (minimum of one is required; check all that				ply)		Surface Soil Co				
Surface Water (A1)			_Aquatic Faur				tated Concave	Surface (B8)		
High Water Table (A2)			_	its (B15) (LRR U)		Drainage Patte				
Saturation (A3)			_Hydrogen Su	ulfide Odor (C1)		Moss Trim Line	es (B16)			
Water Marks (B				izospheres on Livir	···9 —	-	ater Table (C2))		
Sediment Depos		_	Roots (C3)			Crayfish Burrov				
Drift Deposits (B	-	_	Presence of	Reduced Iron (C4)			ble on Aerial Im	nagery (C9)		
Algal Mat or Cru	` '			Reduction in Tilled		X Geomorphic Position (D2)				
Iron Deposits (B	•		Soils (C6)			Shallow Aquitard (D3)				
	le on Aerial Imagery	(B7)	Thin Muck S	` ′		X FAC-Neutral Test (D5)				
Water-Stained L	.eaves (B9)		Other (Expla	ain in Remarks)	Sphagnum moss (D8) (LRR T, U)					
Field Observations	s:									
Surface water prese	ent? Yes _	No	X Depth	(inches)		Wetland hyd	drology prese	ent?		
Water table present	t? Yes _	No	X Depth							
Saturation present?	? Yes _	No	X Depth	(inches)	Ye	es <u>X</u>	No			
(includes capillary f	ringe)									
Describe recorded	data (stream gauge	, monitoring \	well, aerial ph	notos, previous ins	spections), if a	vailable:				
Remarks:										

VEGETATION -- Use scientific names of plants. Sampling Point: Plot 82 **Dominance Test Worksheet** Absolute Dominant Indicator % Cover Tree Stratum (Plot size: 30-m radius) Species Staus **Number of Dominant Species** that are OBL, FACW, or FAC: None (A) Total Number of Dominant

3				Species Across all Strata: 4 (B)
4				Percent of Dominant Species
5				that are OBL, FACW, or FAC: 100.00% (A/B)
6				
7				Prevalence Index Worksheet
8				Total % Cover of:
		= Total Cove	r	OBL species 20 x 1 = 20
50% of total cover:		of total cover		FACW species 57 x 2 = 114
Sapling/Shrub Stratun (Plot size: 15-m radius)				FAC species 75 x 3 = 225
1 Liquidambar styraciflua	45	Υ	FAC	FACU species 0 x 4 = 0
2 Baccharis halimifolia	15	<u> </u>	FAC	UPL species 0 x 5 = 0
	10		FAC	
3 Quercus nigra				
4 Ilex opaca	2	<u>N</u>	FAC	Prevalence Index = B/A = 2.36
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid test for hydrophytic vegetation
7				X 2 - Dominance test is >50%
8				3 - Prevalence index is ≤3.0 and at least 80%
	72	= Total Cove	r	X of total cover has indicator status*
50% of total cover: 36	20%	of total cover	14.4	4 - Morphogical adaptations* (provide
Herb Stratum (Plot size: 1m ²)				supporting data in Remarks or on a
1 Bidens aristosa	30	Υ	FACW	separate sheet)
2 Scirpus cyperinus	20	<u> </u>	OBL	Problematic hydrophytic vegetation*
3 Solidago gigantea	15		FACW	(explain)
	10	N	FACW	
4 Panicum verrucosum				*Indicators of hydric soil and wetland hydrology must be
5 Gelsemium sempervirens	3	<u>N</u>	FAC	present, unless disturbed or problematic
6 Mikania scandens	2	N	FACW	Definitions of Four Vegetation Strata:
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
8				or more in diameter at breast height (DBH),
9				regardless of height.
10				Sapling/Shrub – Woody plants, excluding
11				vines, less than 3 in. DBH and greater than or
12				equal to 3.28 ft (1 m) tall
	80	= Total Cove	r	Herb – All herbaceous (non-woody) plants,
50% of total cover: 40		of total cover		regardless of size, and woody plants less than 3.28
Woody Vine Stratum (Plot size: 15-m radius)	_			ft tall
1				Woody Vine – All woody vines greater than 3.28 ft
				in height.
3				in neight.
4				
5				
6				Hydrophytic
<u>-</u>		= Total Cove		vegetation
50% of total cover:	20%	of total cover	r:	present? Yes X No
	_			
Remarks: (Include photo numbers here or on a separat	e sheet)			
	,			

Profile Des	cription: (Describe	to the dept	h needed to docun	nent the in	dicator o	r confi	rm the absence of ind	icators.)		
Depth	Matrix		Red	lox Feature	s					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 1	10YR 4/3	98	10YR 5/6	2	С	М	silty clay loam			
1 - 6	10YR 5/1	49	10YR 5/6	2	С	М	silty clay loam			
	10YR 5/2	49								
6 - 12	10YR 5/2	49	10YR 4/6	2	С	М	sandy clay	Fe/Mn concretions		
	10YR 5/3	49		"hea						
		-								
¹ Type: C = 0	Concentration, D = D	epletion, RM	1 = Reduced Matrix,	MS = Masl	⊥ ked Sand	Grains	. ² Location: PL = P	ore Lining, M = Matrix		
	Indicators:	,					Indicators for Probler	_		
Histisol			Polyvalue Belov (LRR S, T, U)	w Surface (30)		1 cm Muck (A10) (I	-		
	pipedon (A2)	•	Thin Dark Surfa	ace (S9) (Li	RR S, T, I	J) -	2 cm Muck (A10) (I	·		
	istic (A3)	•	 Loamy Mucky N			-	Reduced Vertic (F1	-		
— Hydroge	en Sulfide (A4)	•	Loamy Gleyed		. ,		(outside MLRA 15			
	d Layers (A5)	•	X Depleted Matrix	. ,		-	— · Piedmont Floodpla			
Organic	Bodies (A6) (LRR P	P, T, U)	Redox Dark Su	rface (F6)			(LRR P, S, T)	11 00110 (1 10)		
5 cm M	ucky Mineral (A7) (L l	RR P, T, U)	Depleted Dark							
Muck P	resence (A8) (LRR L	J)	Redox Depress	ions (F8)			(MLRA 153B)	, ()		
1 cm M	uck (A9) (LRR P. T)	•	Marl (F10) (LRF	R U)		-	Red Parent Materia	al (TF12)		
Deplete	d Below Dark Surfac	e (A11)	Depleted Ochrid	c (F11) (ML	.RA 151)	-	Very Shallow Dark	Surface (TF12)		
Thick D	ark Surface (A12)	•	Iron-Manganes	e Masses (F12)	-	Other (explain in re	marks)		
Coast P	rairie Redox (A16)		X (LRR O, P, T)	`	,	-	<u> </u>			
(MLRA		•	Umbric Surface	(F13) (LRI	R P, T, U))				
Sandy N	Mucky Mineral (S1)	•	Delta Ochric (F	17) (MLRA	151)		3			
(LRR [°] O		' <u>-</u>	Reduced Vertic	(F18) (ML I	RA 150A	, 150E		³ Indicators of hydrophytic vegetation and weltand hydrology must be) present, unless disturbed or		
Sandy (Gleyed Matrix (S4)	· ·	Piedmont Flood	lplain Soils	(F19) (M I	LRA 14	9A) present, unless dis			
Sandy F	Redox (S5)		Anomalous Brig				problematic			
Stripped	d Matrix (S6)	_	(MLRA 149A, 1			•				
Dark Sເ	ırface (S7) (LRR P, S	S, T, U)								
Postrictivo	Layer (if observed)	١.								
Type:	Layer (II observed)	/•								
Depth (inch	es).			Hydric so	il presen	t?	Yes X	No		
				,	, p. 000					
Remarks:										