



ATTACHMENT G — DRAFT WETLAND DELINEATION REPORT



Preliminary Wetland Delineation

Highway 67 EIS - Walnut Ridge to Missouri State Line
ARDOT Job No. 100512



Prepared For:

Arkansas Department of Transportation

September 2022





Highway 67 EIS - Walnut Ridge to MO State Line

Environmental Scientist's Certification

I hereby certify that this Preliminary Wetland Delineation for ARDOT Job No. 100512, Highway 67 EIS - Walnut Ridge to Missouri (MO) State Line was prepared by Garver under my direct supervision for the Arkansas Department of Transportation (ARDOT).

Ryan Mountain
Senior Environmental Scientist





Highway 67 EIS - Walnut Ridge to MO State Line

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1.0 Introduction

The Arkansas Department of Transportation (ARDOT) is preparing an Environmental Impact Statement (EIS) to study improvements between the Highway (Hwy.) 412 and Hwy. 67 interchange at Walnut Ridge and the Missouri state line in order to address the deficiency in the National Highway System in northeast Arkansas. The purpose of the project is to enhance connectivity and continuity of the National Highway System, provide a more resilient roadway, and provide for increased opportunity for economic development in northeast Arkansas. Construction of the connection would complete the improvements of future interstate 57 (I-57) within Arkansas. The ARDOT is assessing the environmental features present on the site for evaluation of avoidance and minimization of potential wetland impacts. As a result, ARDOT has retained Garver, LLC to develop planning documents, conduct a preliminary wetland delineation and other environmental research, and pursue appropriate 404 permit(s).

2.0 Project Area

The proposed project occurs in the counties of Clay, Lawrence, and Randolph in northeast Arkansas. The project study area, the preferred alignment documented in the Draft EIS, is approximately 42 miles in length, 2,404 acres in size, and begins at the Hwy. 412 / Hwy. 67 Interchange at Walnut Ridge and ends at the Arkansas – Missouri state line east of the intersection of Hwy. 67 and County Road 278 in Corning, Randolph County, Arkansas. A site location map is provided in **Appendix A**. From the southern terminus, the study area heads north towards Pocahontas, AR and then travels northeast toward Corning, AR to the south of, but roughly parallel with, U.S. Hwy. 62. The footprint of the study area is defined as a consistent 400-foot-wide right-of-way (ROW) with larger areas at the proposed interchanges. It is assumed that all areas within the ROW footprint would be directly affected by construction activities.

The project area is within the Western Lowlands Holocene Meander Belts and Western Lowlands Pleistocene Valley Trains of the Mississippi Alluvial Plains ecoregion. This ecoregion is mostly flat with limited relief provided by river terraces, swales, levees, and sand dunes. Poorly drained, clayey soils are characteristic with areas of sand and silt deposits. Natural vegetation and





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hydrology have been degraded by agriculture. Predominant natural vegetation is mostly southern floodplain forests with native bottomland hardwoods (Woods et. al. 2004).

2.1 Hydrology

The overall hydrology along the project study area is significantly disturbed due to historic and current agricultural practices in the area. Natural waterways ways have been altered for irrigation and drainage associated with crop production. Many streams have been re-routed or connected by agricultural ditches, roadside ditches, and canals. Intense irrigation such as that from rice production has resulted in seasonally flowing waters that may be considered relatively permanent waters (RPWs) in otherwise ephemeral ditches. Many natural wetlands have been drained for farming, and floodplains have been altered by levees for flood protection. Flat topography and predominantly poorly drained soils, results in poor hydrologic relief.

2.2 Vegetation

Vegetation in the area is also heavily altered by agriculture, and native vegetation is mostly confined to field margins, forested wetlands, and riparian zones. At the time of the delineation, the study area was dominated by agricultural crops that included rice, soybean, and corn. Common dominant wetland vegetation included green ash (*Fraxinus pennsylvanica*), red maple (*Acer rubrum*), sedges (*Carex* spp.), sugarberry (*Celtis laevigata*), flat sedges (*Cyperus* spp.) rushes (*Juncus* spp.), water oak (*Quercus nigra*), and willow oak (*Quercus phellos*). Upland areas, typically field and roadway margins, were dominated by annual ragweed (*Ambrosia artemisiifolia*), field brome (*Bromus arvensis*), Bermuda grass (*Cynodon dactylon*), white ash (*Fraxinus americana*), red mulberry (*Morus alba*), American pokeweed (*Phytolacca americana*), post oak (*Quercus stellata*), sassafras (*Sassafras albidum*), Johnsongrass (*Sorghum halepense*), and winged elm (*Ulmus alata*). Other common plants included giant ragweed (*Ambrosia trifida*), trumpet-creeper (*Campsis radicans*), golden crown grass (*Paspalum dilatatum*), barnyard grass (*Echinochloa crus-galli*), curly dock (*Rumex crispus*), greenbrier species (*Smilax* spp.), eastern poison ivy (*Toxicodendron radicans*) and grapevine species (*Vitis* spp.).



2.3 Soils

Like hydrology and vegetation, soils in the area have a history of agricultural disturbance including frequent tilling and other amendments. The Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS) describes the soils in the study area as hydric and in large part, poorly or somewhat poorly drained. Of the 28 soil map units within the study area, all of which are hydric, 8 units make up 75 percent of the study area. The 8 units include Bosket fine sandy loam, 0 to 3 percent slopes, Crowley sand loam, Jackport silty clay, 0 to 1 percent slopes (Clay County), Dundee silt loam, 0 to 1 percent slopes, Patterson fine sandy loam, 0 to 1 percent slopes, McCrory fine sandy loam, 0 to 1 percent slopes, Jackport silty clay, 0 to 1 percent slopes (Lawrence County), and Foley silt loam, 0 to 1 percent slopes.

3.0 Regulatory Basis

Discharges of dredged or fill material into Waters of the United States (WOTUS) are regulated under Section 404 of the Clean Water Act. Any such action proposed in wetlands or other Waters of the U.S. are subject to review by the U.S. Army Corps of Engineers (USACE) and other federal and state agencies and require authorization by USACE. For jurisdictional purposes, USACE and the U.S. Environmental Protection Agency (EPA) jointly define wetlands as follows: *Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (USACE, 1987).*

4.0 Methodology

The U.S. Fish and Wildlife Service (USFWS) in cooperation with Cowardin, et al. (1979), have identified a classification system that is widely accepted by the USACE and USFWS in relation to classifying wetland and stream habitats (i.e., Classification of Wetlands and Deepwater Habitats of the United States). Wetlands and streams in the study area have been identified utilizing the methodology presented in this classification system.



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A desktop level analysis was initially completed to determine the presence of aquatic resources. The detailed review of environmental databases and GIS resources included but was not limited to National Wetland Inventory (NWI), NRCS soils data, LIDAR mapping, historic aerial photography, and U.S. Geological Survey (USGS) historic topography. According to FEMA maps and the NRCS WSS, floodplains and hydric soils are present in the study area. Refer to **Appendix B** and **Appendix C** for floodplain and soils maps, respectively.

Due to the extensive farming practices occurring within the study area, locations of farmed wetlands (FWs) were likewise identified by desktop delineation prior to the site visit. Landowner rights prevented the use of USDA/NRCS data to be reviewed for locations of FWs and prior converted cropland; however, these resources were identified by overlaying NRCS hydric soils data, USGS topographic mapping, land use data, and historic aerial photography. By adjusting the transparency of these data, and delineating areas saturated for multiple years that were cleared of trees prior to 1985, overlapping areas are shown, which reveal high confidence areas that are likely FWs.

Water resources identified by desktop analysis were then field confirmed the week of March 1, 2021, during a preliminary visual assessment to the extent practicable at public ROW where the study area intersected water resources, which were classified by qualified wetland biologists based on Cowardin et al. (1979).

A detailed field investigation of the study area was performed by Ryan Mountain, Colby Marshall, and Joe Rujawitz of Garver on July 18-21, 2022. The entire study area was visually inspected to locate areas of potentially jurisdictional wetlands (W) and other waters (OW). According to weather stations in Evening Shade and Corning, AR, the area received approximately 1.2 inches inch of rainfall two weeks before the site visit. The USACE's Antecedent Precipitation Tool was used to determine precipitation was considered normal for the time of year during the first two days of investigation and was trending drier than normal by the third day. Other conditions on site appeared typical for an area with intense agriculture.

Wetland determinations were made using observable vegetation, hydrology, and soils in accordance with the routine approach described in the USACE Wetland Delineation Manual





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(1987), and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain (Version 2.0). As described in the Regional Supplement, vegetation plots were altered depending on the size and shape of the plant community being sampled. Wetlands were classified using the system outlined in Cowardin et. al. 1979 as one of the following based on observed characteristics: palustrine unconsolidated bottom (PUB); palustrine emergent (PEM); palustrine forested (PFO); and palustrine scrub-shrub (PSS). Streams were likewise classified using the Cowardin Classification Method as either ephemeral (Eph.), intermittent (Int.), or perennial (Per.). Aquatic resources delineated within the study area are shown on detailed maps with aerial backgrounds provided in **Appendix B**.

Detailed information was collected at 70 locations to document the wetland and upland characteristics observed in the study area. In addition to the 70 data points (DPs), observation points were taken regularly along the entire study area. Wetland data forms can be found in **Appendix D** and photographs taken during the site investigation will be provided as a separate document.

Due to the disturbed hydrology in the study area (i.e. re-routed streams, drainage, and irrigation through agricultural ditches), categorization (Cowardin and jurisdictional status) was at times problematic. Referencing the USACE Jurisdictional Determination Form Instructional Guidebook (USACE & EPA, 2007), it was determined an agricultural ditch would be categorized as jurisdictional if it was considered a RPW and hydrologically contributed directly or indirectly to traditional navigable waters. An RPW exhibits flow year-round or continuous at least seasonally (e.g., 3 months). Periods of flow were based on the two site visits, one in summer and one in winter, as well as ESRI, Google Earth, and historic aerial imagery. Additionally, a ditch was considered jurisdictional if it was an RPW constructed within wetlands or drained or rerouted a jurisdictional waterbody.

Sites documented as FWs were also problematic to confirm based on field observations. In many cases, FWs lacked one or several wetland criteria due to agricultural practices on the land. Consultation with USACE prior to the site visit confirmed that it was not practical to collect a data point at all the documented FW locations within the study area. It was agreed upon that one





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representative data point would be collected within each soil unit present in FW locations. A total of 10 unique soil units were determined to be present in FWs based on NRCS WSS data.

5.0 Results

Due to the scope of the project, aquatic resources and associated data are summarized in tables within **Appendix E**. In summary, 57 streams (totaling 37,377 linear feet), 31 wetlands (totaling 39.07 acres), and 78 farmed wetlands (totaling 624.06 acres), were identified within the study area. The ARDOT is requesting a jurisdictional determination for aquatic resources presented in this report.

6.0 References

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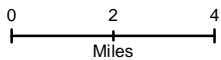
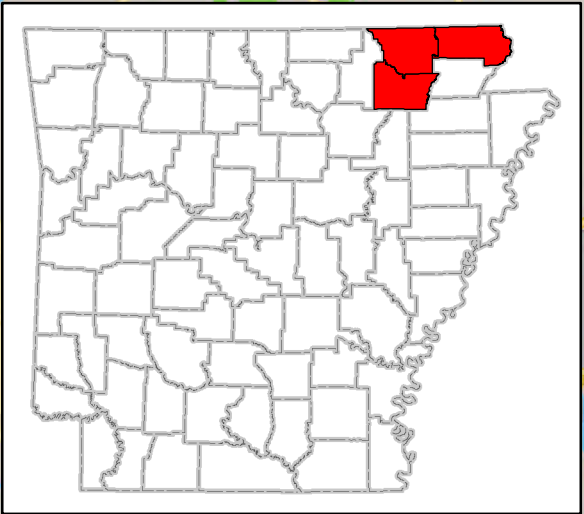
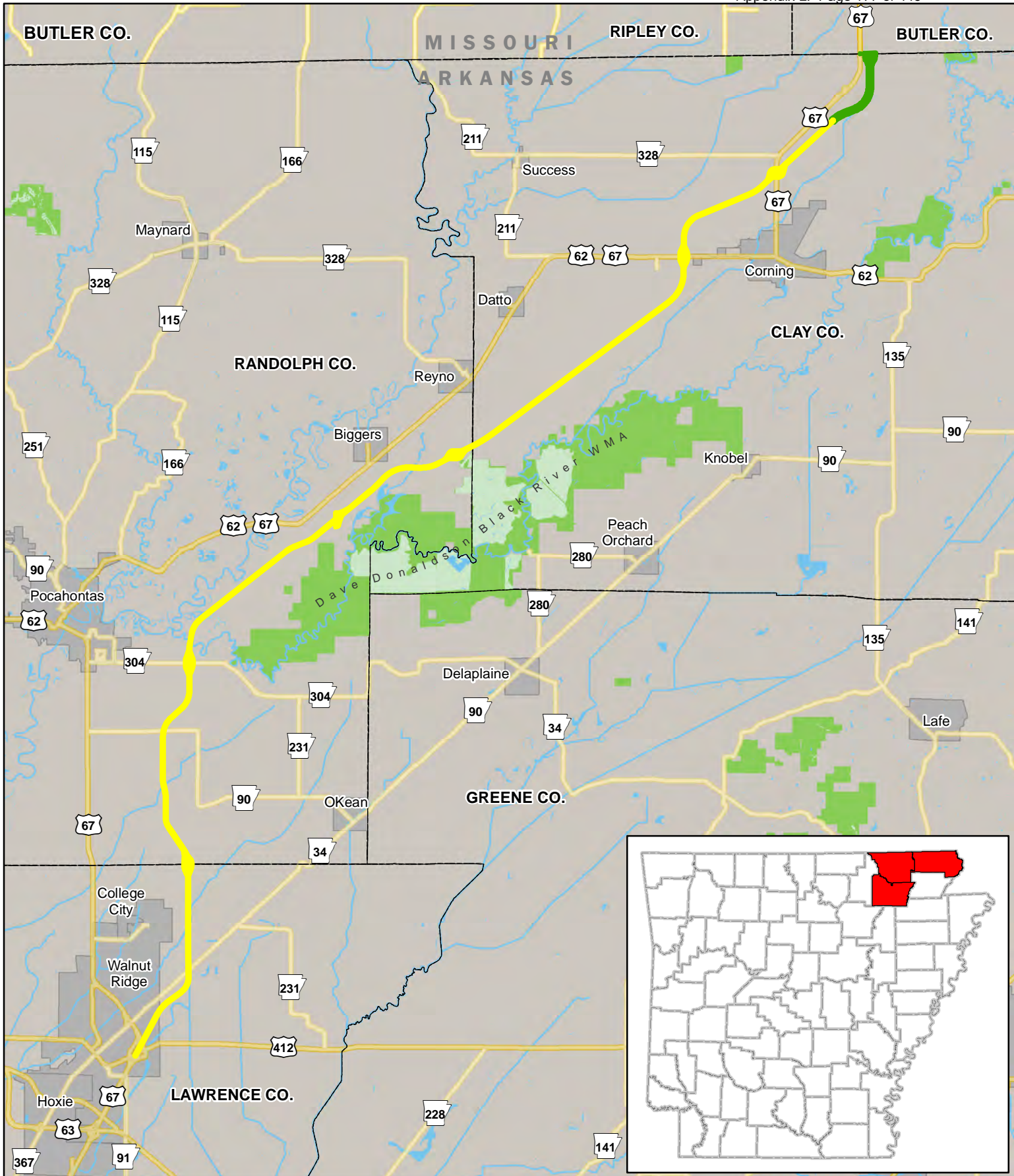
Woods A.J., Foti, T.L., Chapman, S.S., Omernik, J.M., Wise, J.A., Murray, E.O., Prior, W.L., Pagan, J.B., Jr., Comstock, J.A., and Radford, M., 2004, *Ecoregions of Arkansas* (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,000,000).





APPENDIX A

Site Location Map



Alternative 2 Alternative C

**WALNUT RIDGE - MISSOURI STATE LINE
(FUTURE I-57)**
Randolph, Clay, and Lawrence Counties

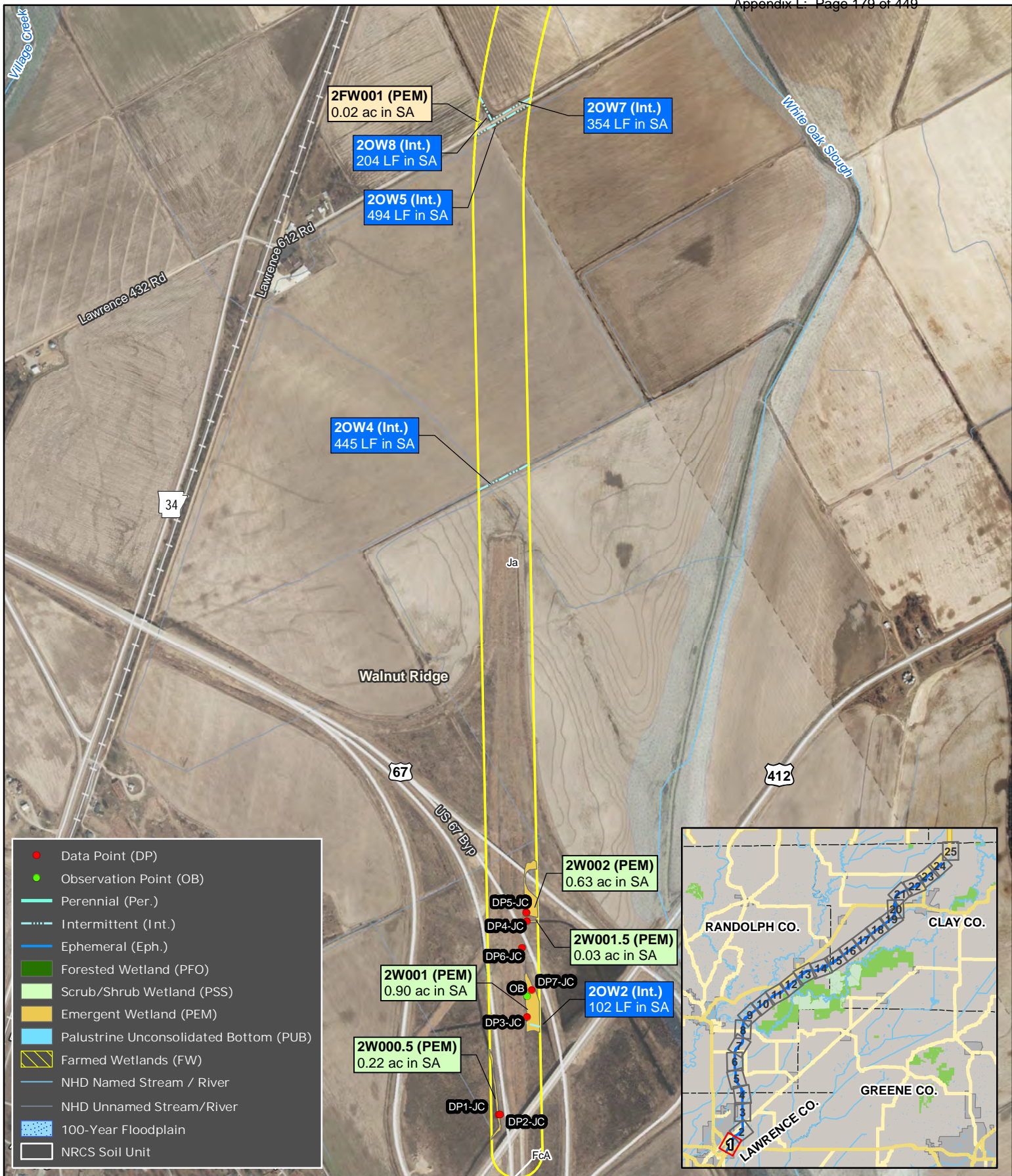
Site Location
Preferred Alignment



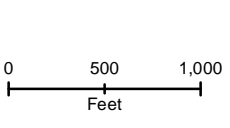
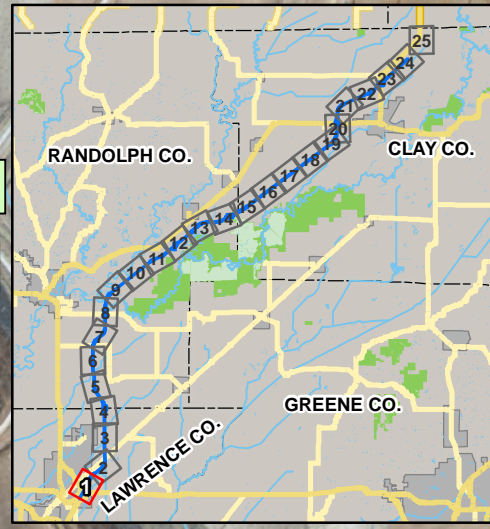


APPENDIX B

Preliminary Wetland Delineation & FEMA Floodplain Map



- Data Point (DP)
- Observation Point (OB)
- Perennial (Per.)
- - - Intermittent (Int.)
- Ephemeral (Eph.)
- Forested Wetland (PFO)
- Scrub/Shrub Wetland (PSS)
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- Palustrine Unconsolidated Bottom (PUB)
- Farmed Wetlands (FW)
- NHD Named Stream / River
- NHD Unnamed Stream/River
- 100-Year Floodplain
- NRCS Soil Unit



Alternatives

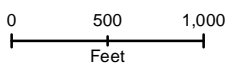
Alternative 2

 Alternative C

**WALNUT RIDGE - MISSOURI STATE LINE
(FUTURE I-57)**
Randolph, Clay, and Lawrence Counties

**Appendix B: Streams,
Floodplains, and Wetlands Detail**





Alternatives
 Alternative 2 Alternative C

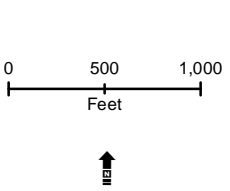
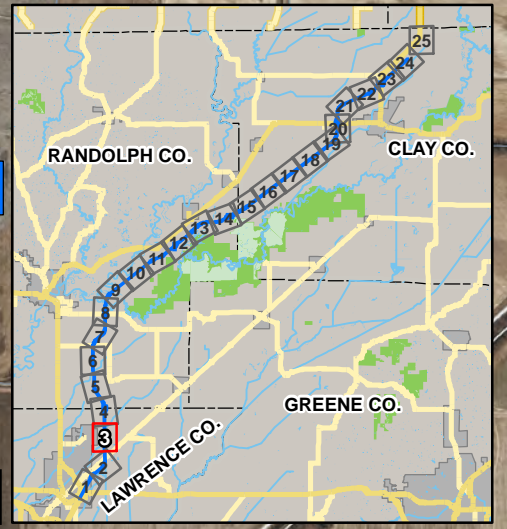
**WALNUT RIDGE - MISSOURI STATE LINE
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 Randolph, Clay, and Lawrence Counties

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- Alternatives
- Alternative 2
 - Alternative C

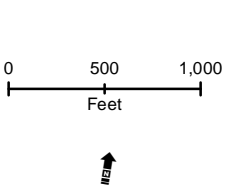
WALNUT RIDGE - MISSOURI STATE LINE (FUTURE I-57)
 Randolph, Clay, and Lawrence Counties

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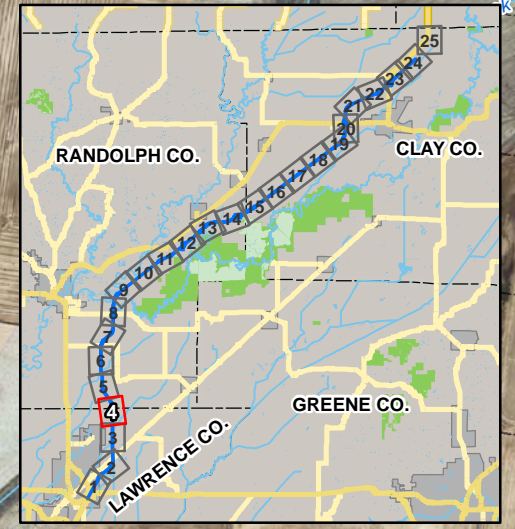




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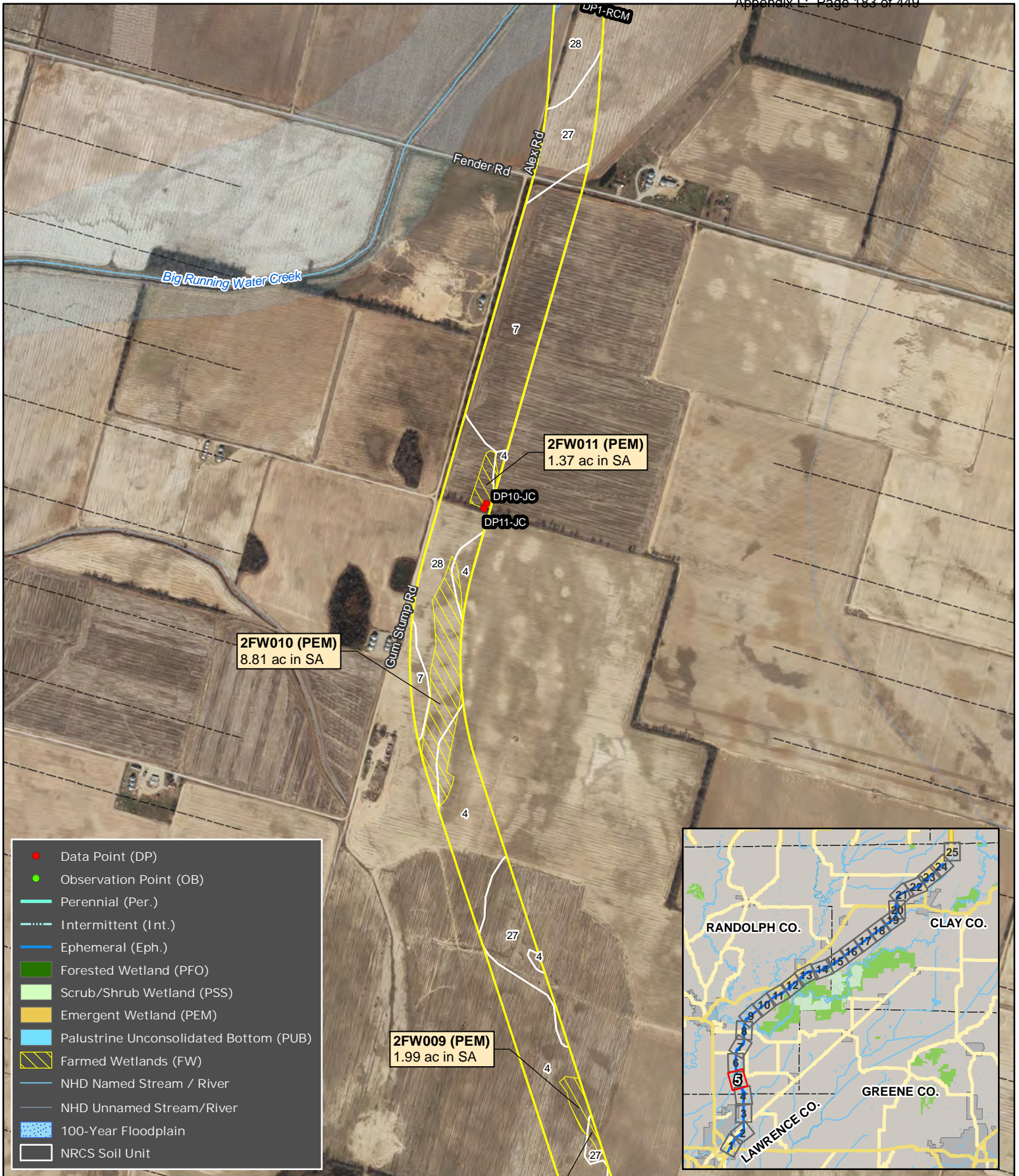
- Alternatives
- Alternative 2
 - Alternative C



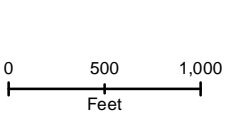
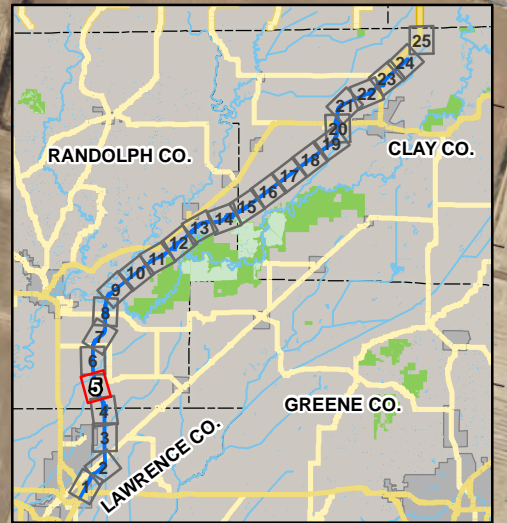
WALNUT RIDGE - MISSOURI STATE LINE
(FUTURE I-57)
 Randolph, Clay, and Lawrence Counties

Appendix B: Streams, Floodplains, and Wetlands Detail





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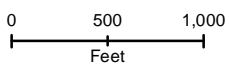
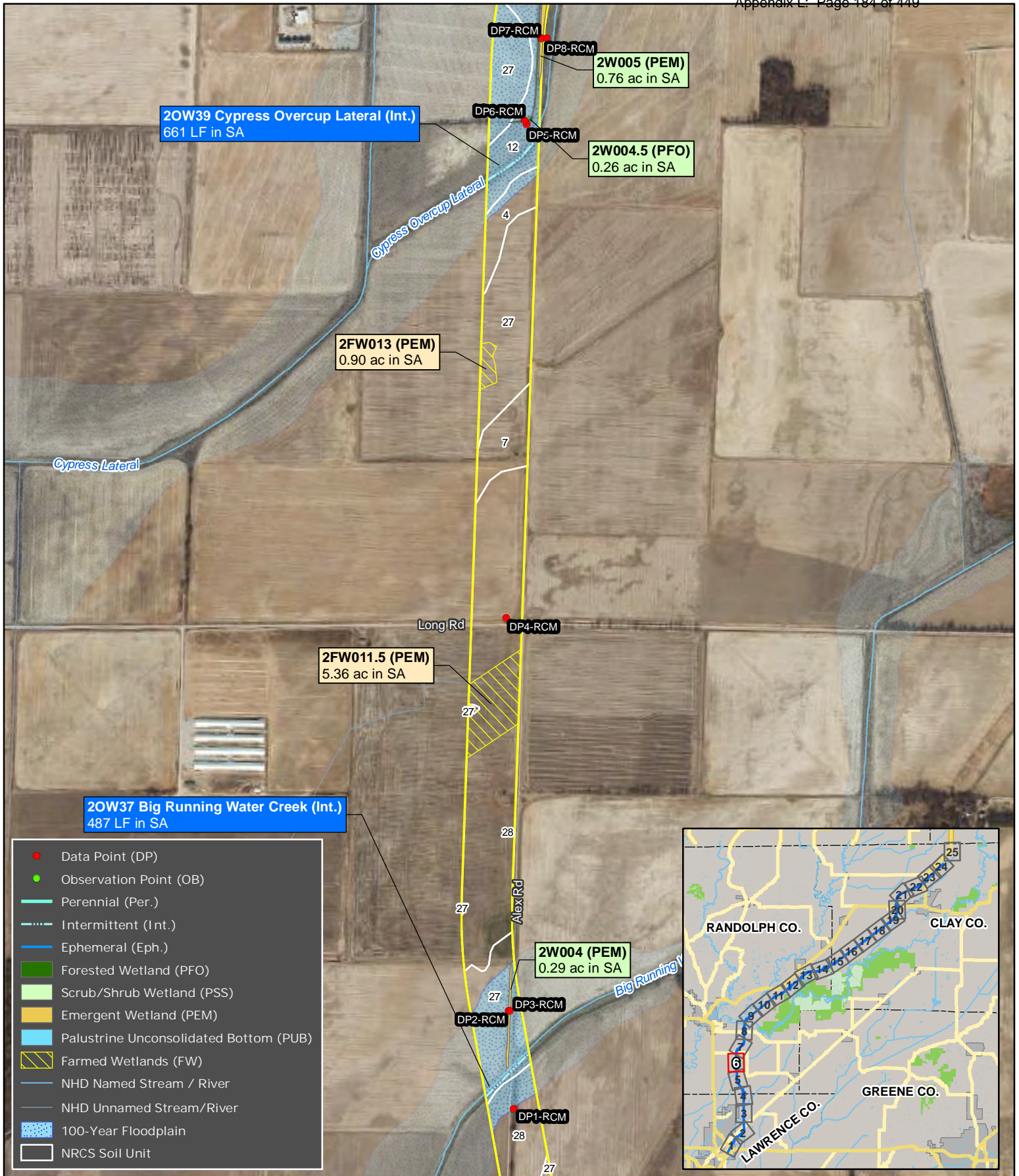


- Alternatives
- Alternative 2
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**WALNUT RIDGE - MISSOURI STATE LINE
(FUTURE I-57)**
Randolph, Clay, and Lawrence Counties

**Appendix B: Streams,
Floodplains, and Wetlands Detail**





Alternatives
 Alternative 2
 Alternative C

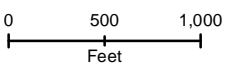
WALNUT RIDGE - MISSOURI STATE LINE
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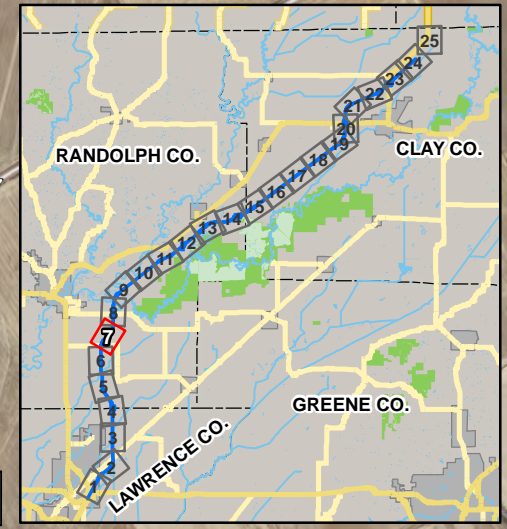




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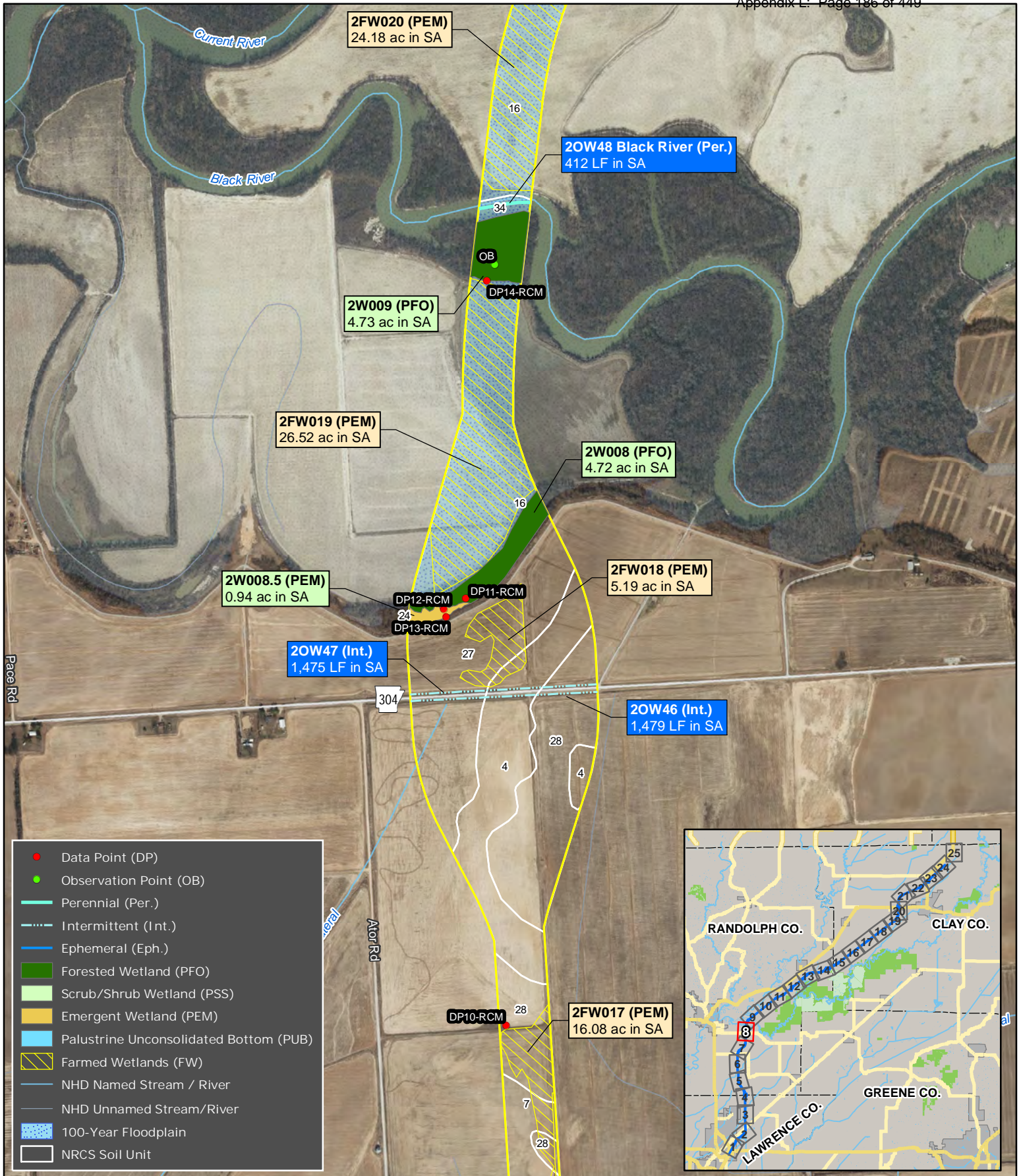
- Alternatives
- Alternative 2
 - Alternative C



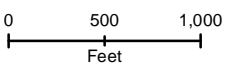
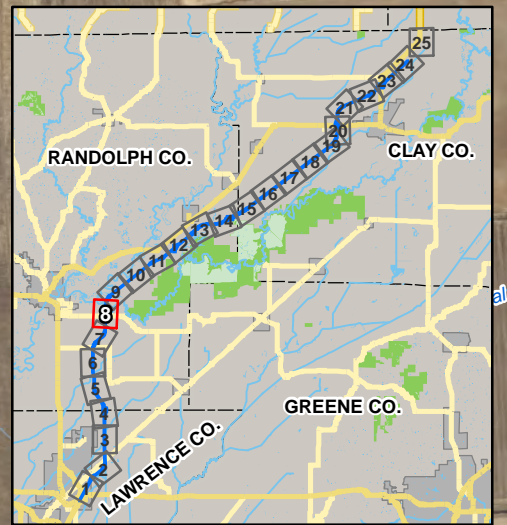
**WALNUT RIDGE - MISSOURI STATE LINE
(FUTURE I-57)**
Randolph, Clay, and Lawrence Counties

**Appendix B: Streams,
Floodplains, and Wetlands Detail**





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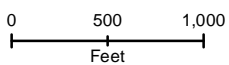
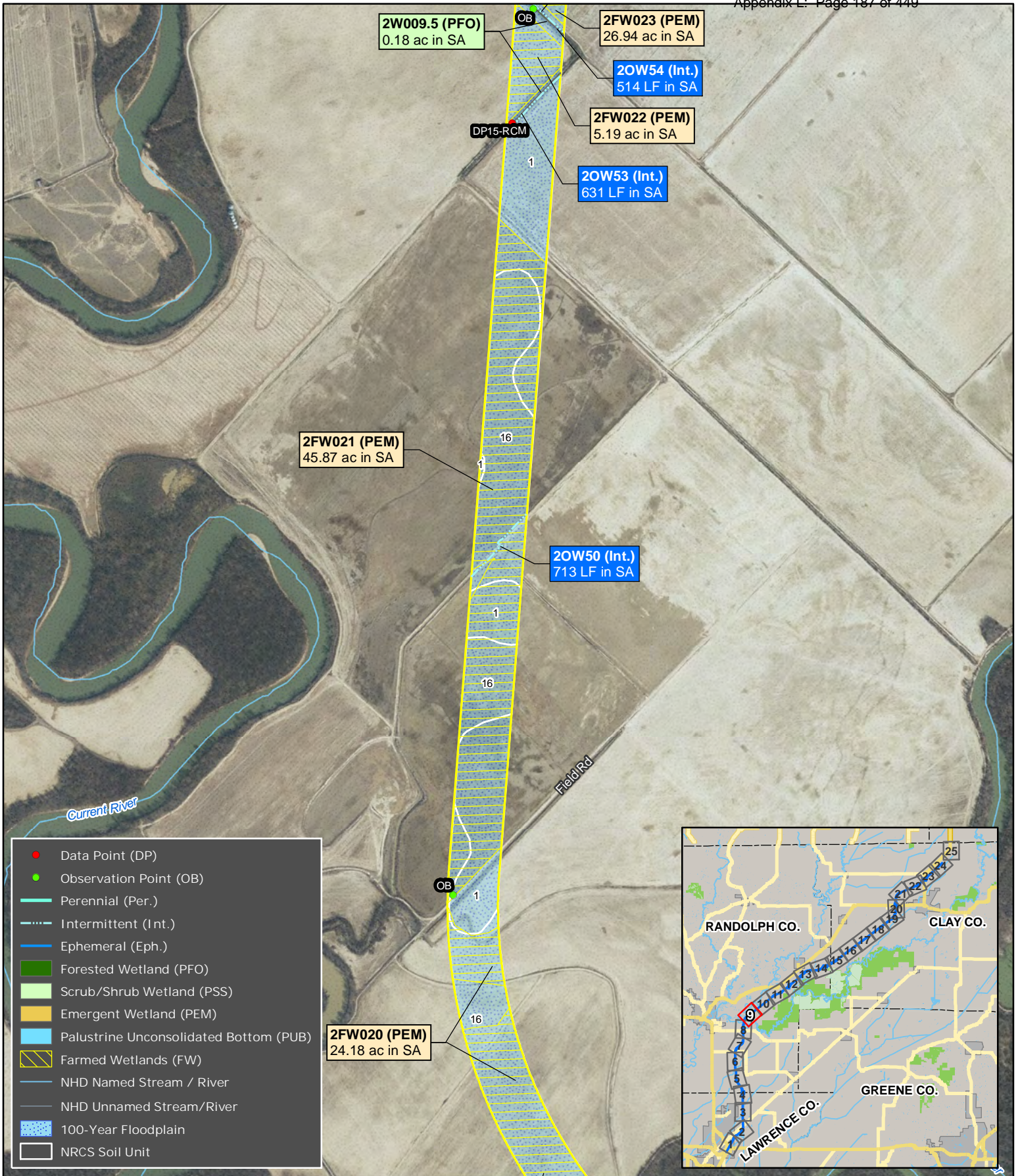


- Alternatives
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WALNUT RIDGE - MISSOURI STATE LINE (FUTURE I-57)
 Randolph, Clay, and Lawrence Counties

Appendix B: Streams, Floodplains, and Wetlands Detail





Alternatives

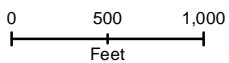
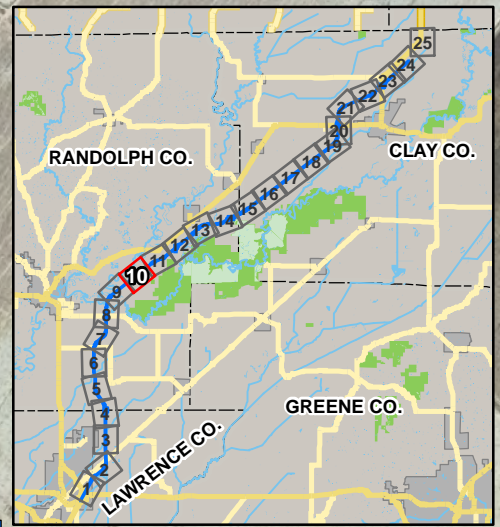
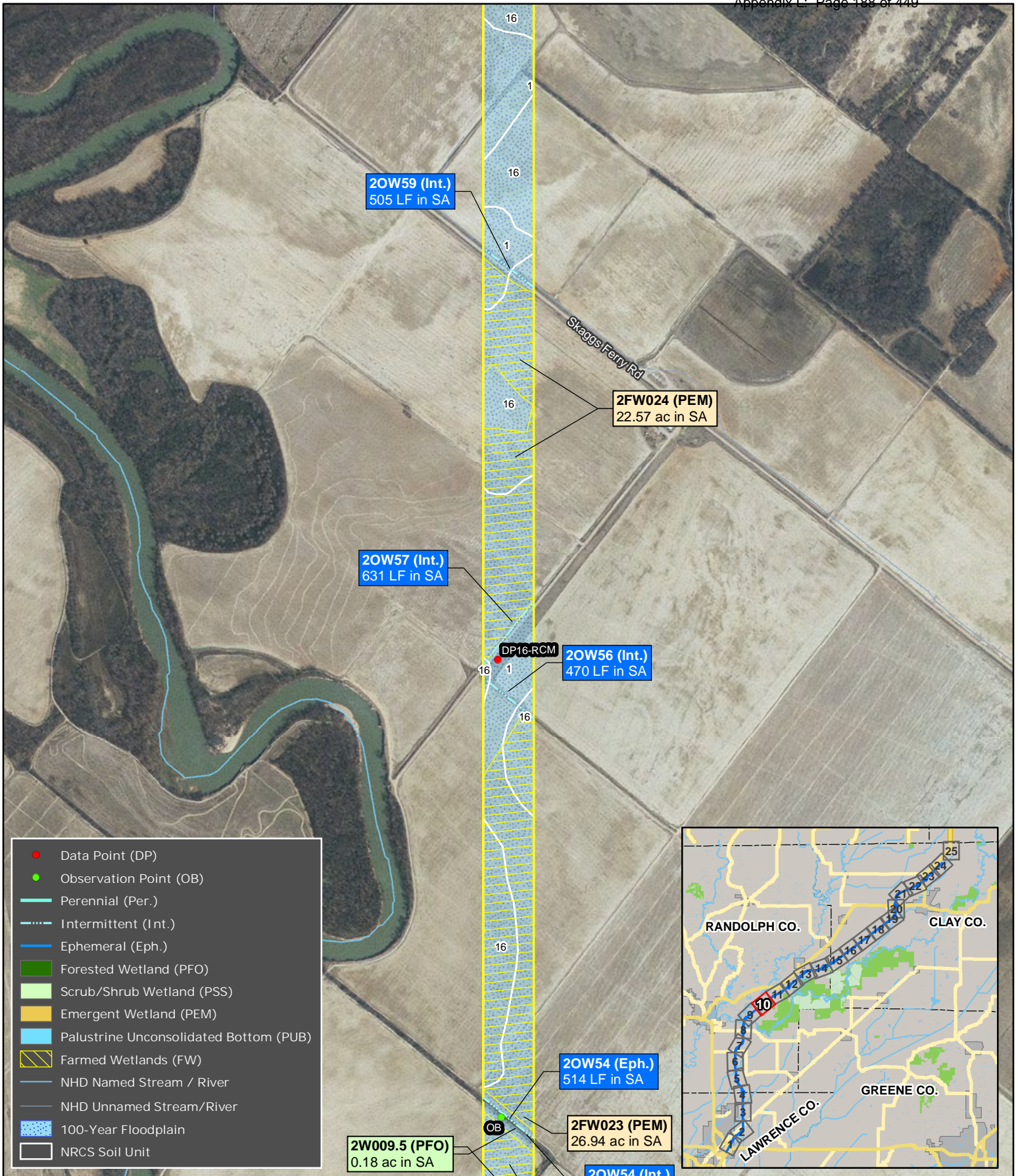
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**WALNUT RIDGE - MISSOURI STATE LINE
(FUTURE I-57)**

Randolph, Clay, and Lawrence Counties

**Appendix B: Streams,
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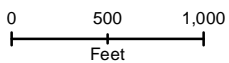
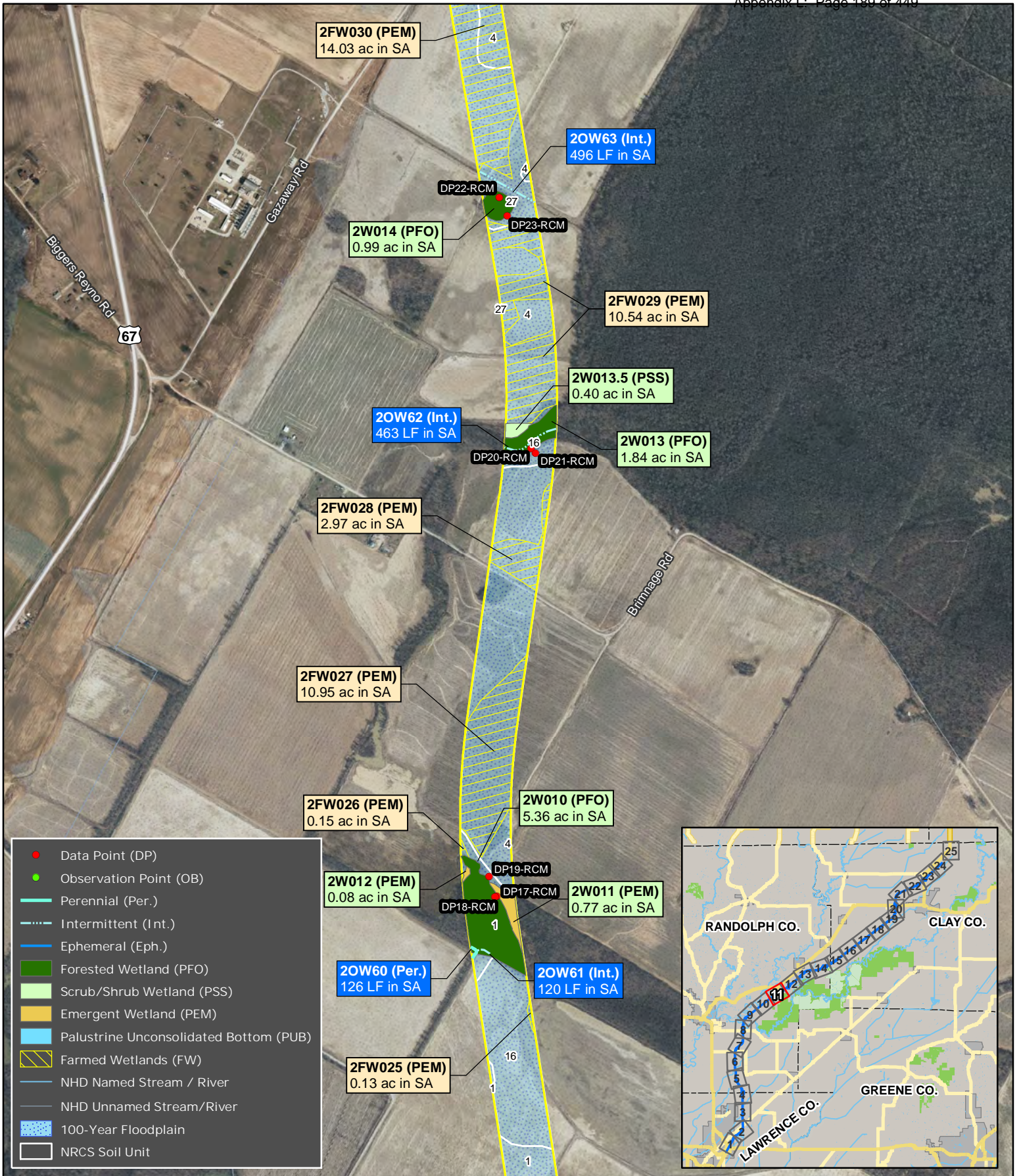
Alternatives

Alternative 2 Alternative C

**WALNUT RIDGE - MISSOURI STATE LINE
(FUTURE I-57)**

Randolph, Clay, and Lawrence Counties

**Appendix B: Streams,
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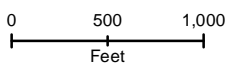
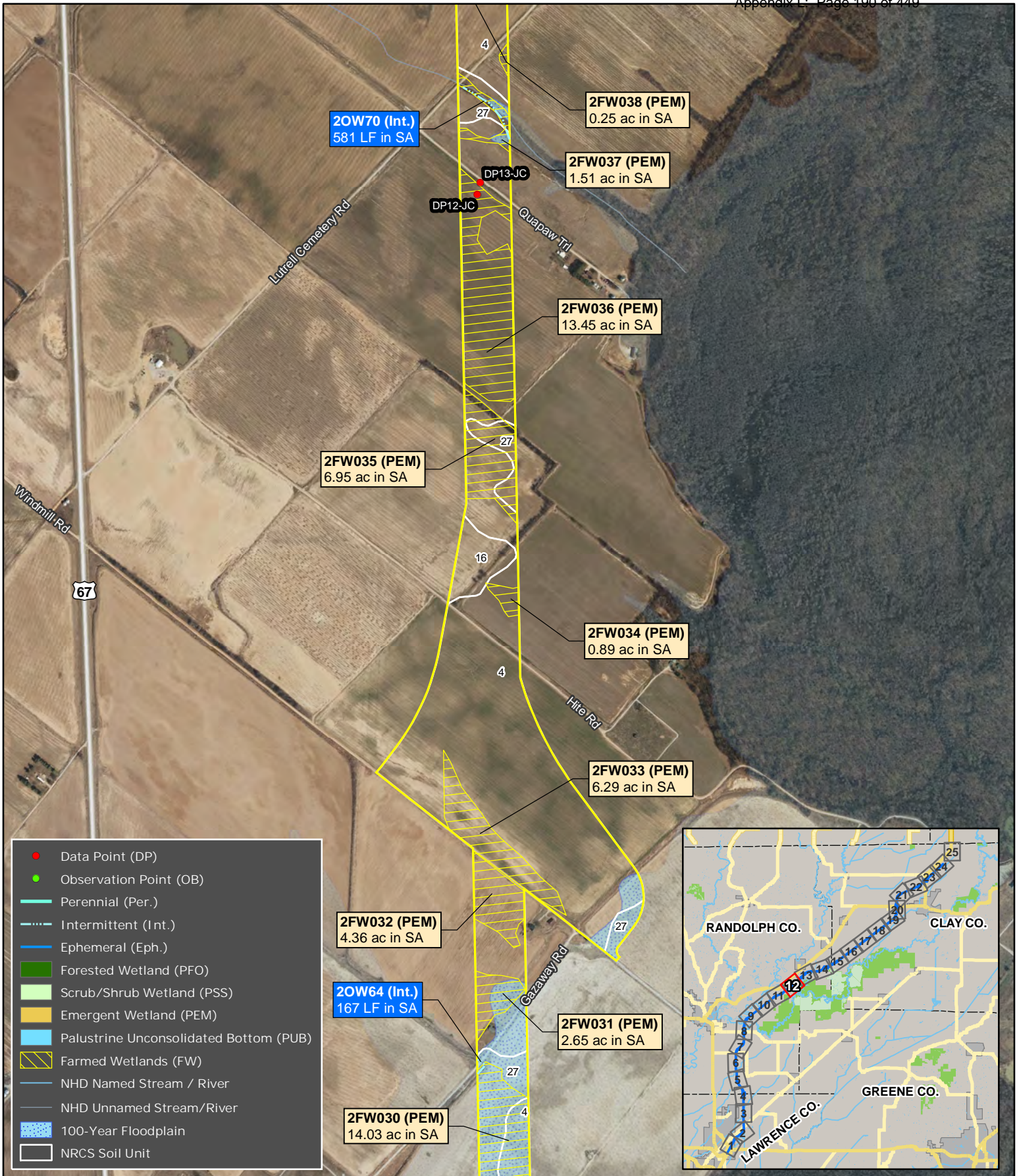
Alternatives

Alternative 2 Alternative C

WALNUT RIDGE - MISSOURI STATE LINE (FUTURE I-57)
Randolph, Clay, and Lawrence Counties

Appendix B: Streams, Floodplains, and Wetlands Detail





Alternatives

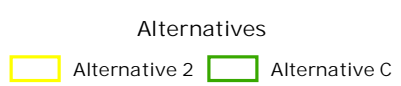
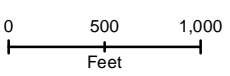
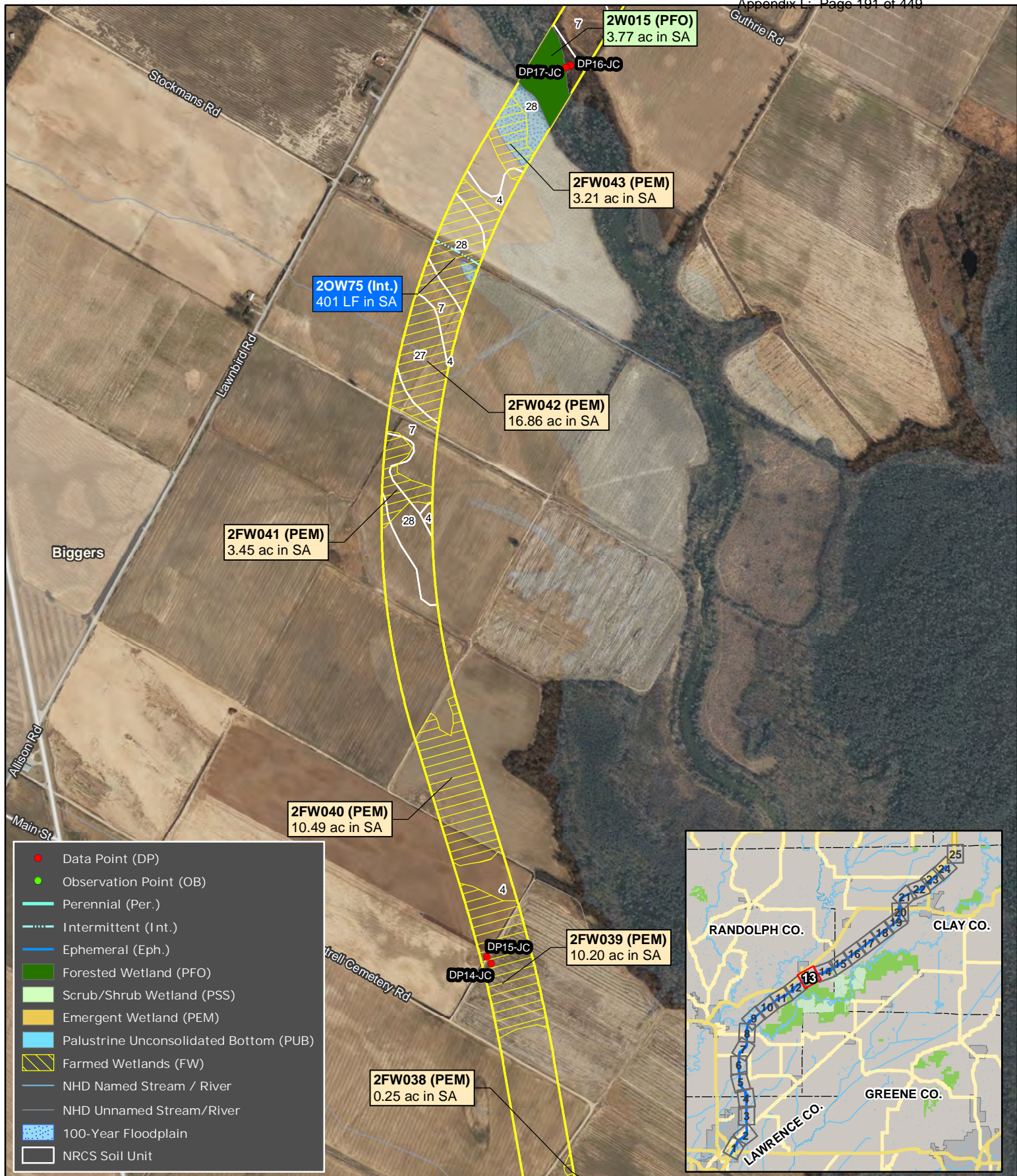


**WALNUT RIDGE - MISSOURI STATE LINE
(FUTURE I-57)**

Randolph, Clay, and Lawrence Counties

**Appendix B: Streams,
Floodplains, and Wetlands Detail**

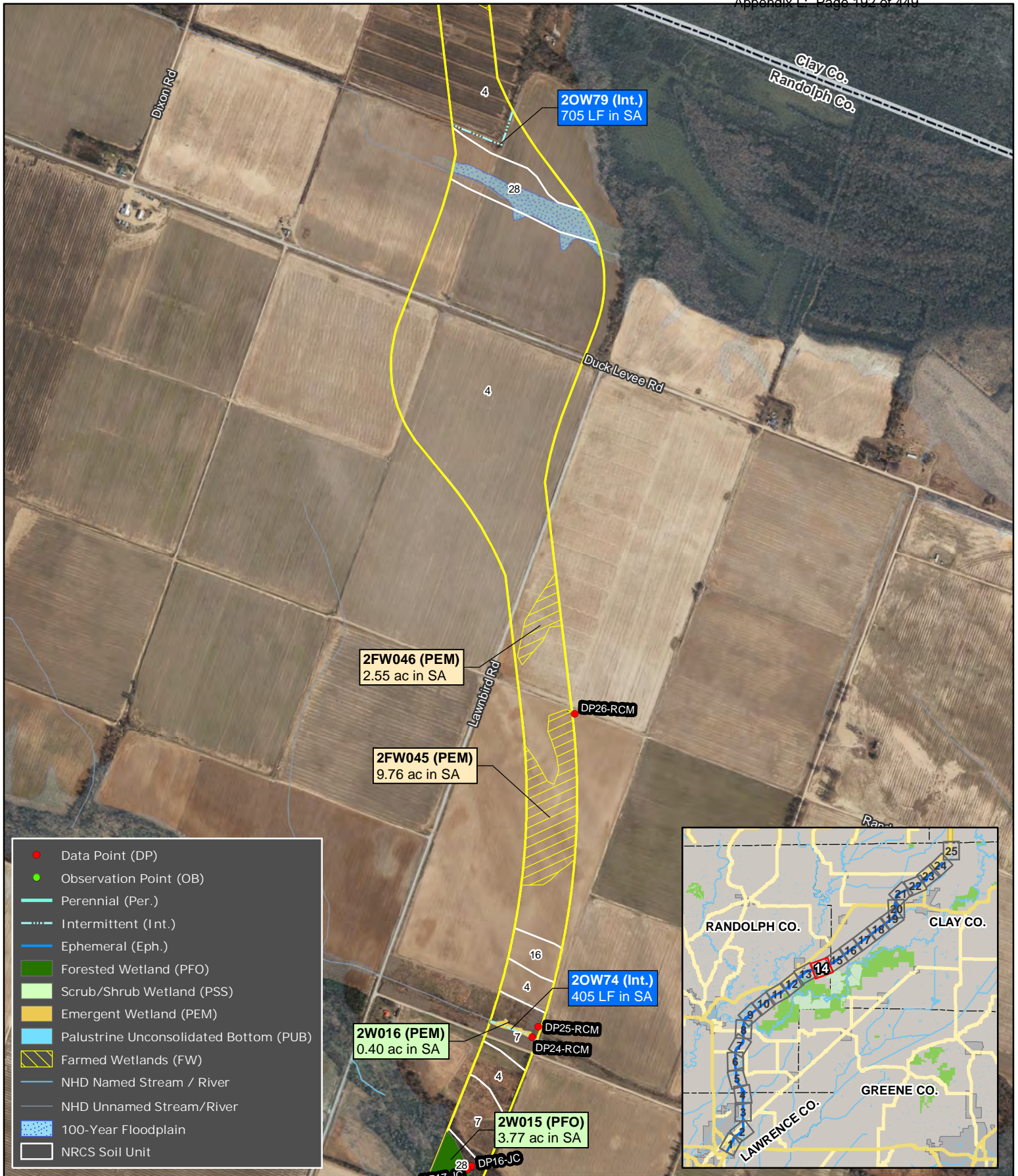




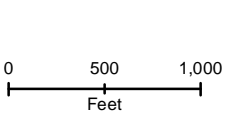
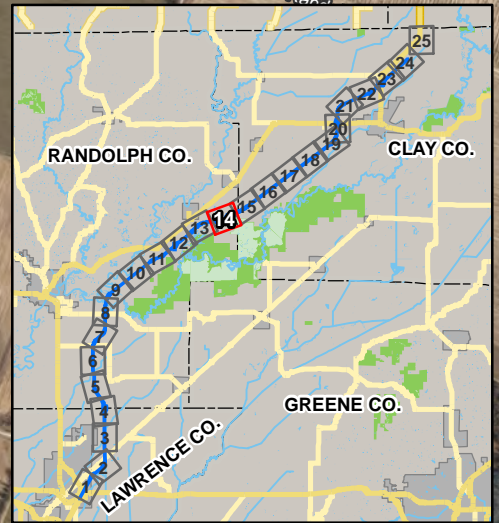
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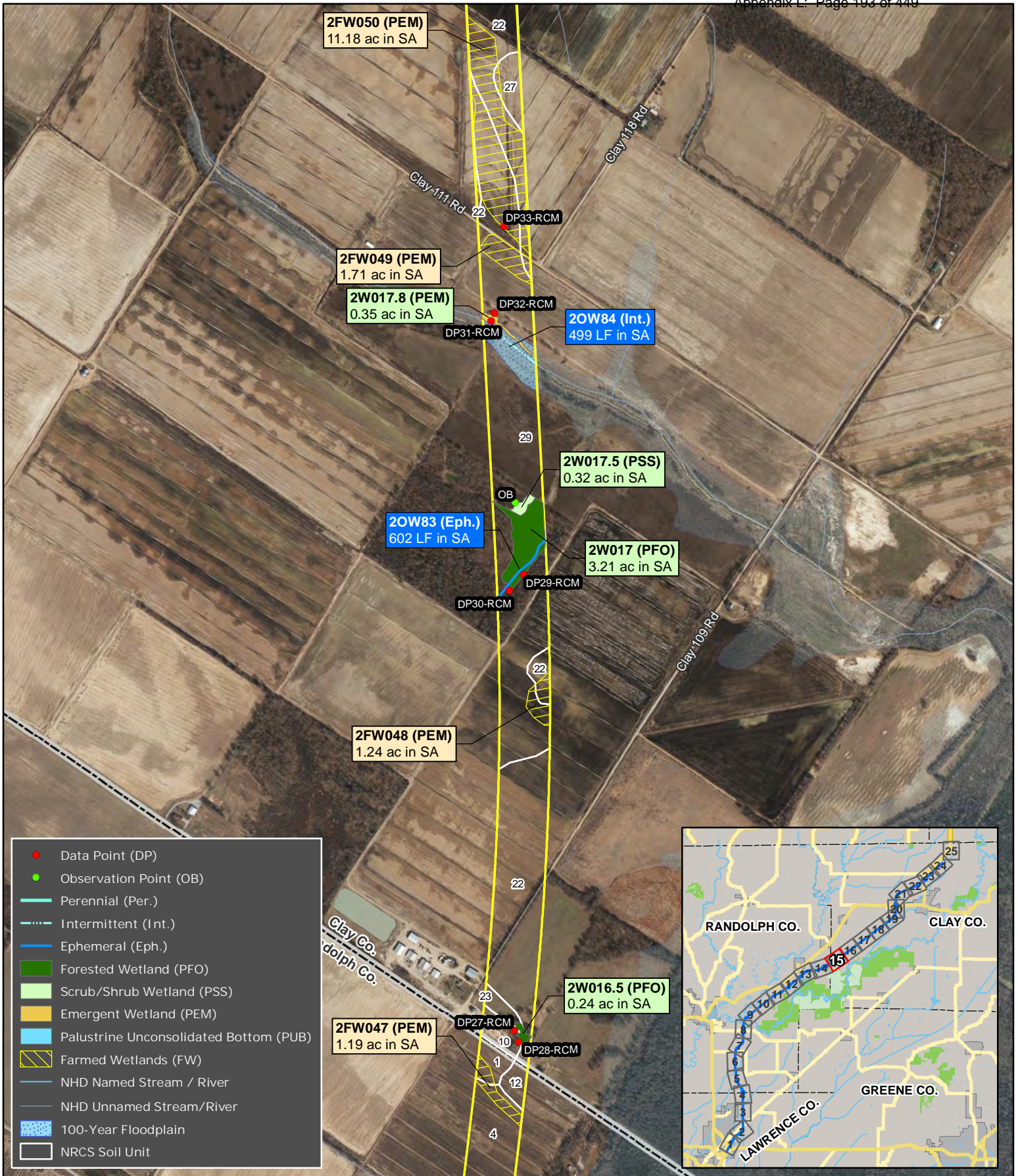
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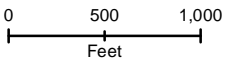
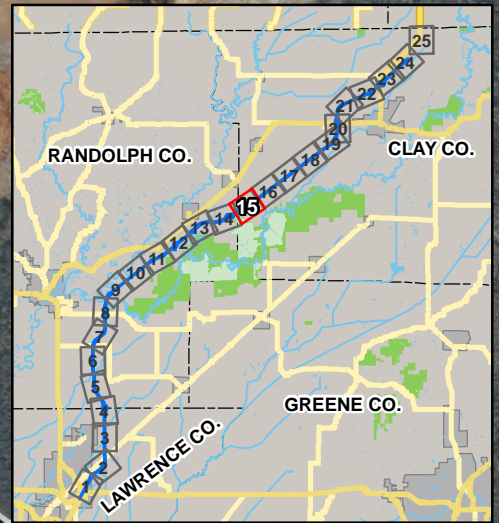
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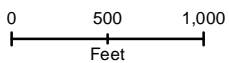
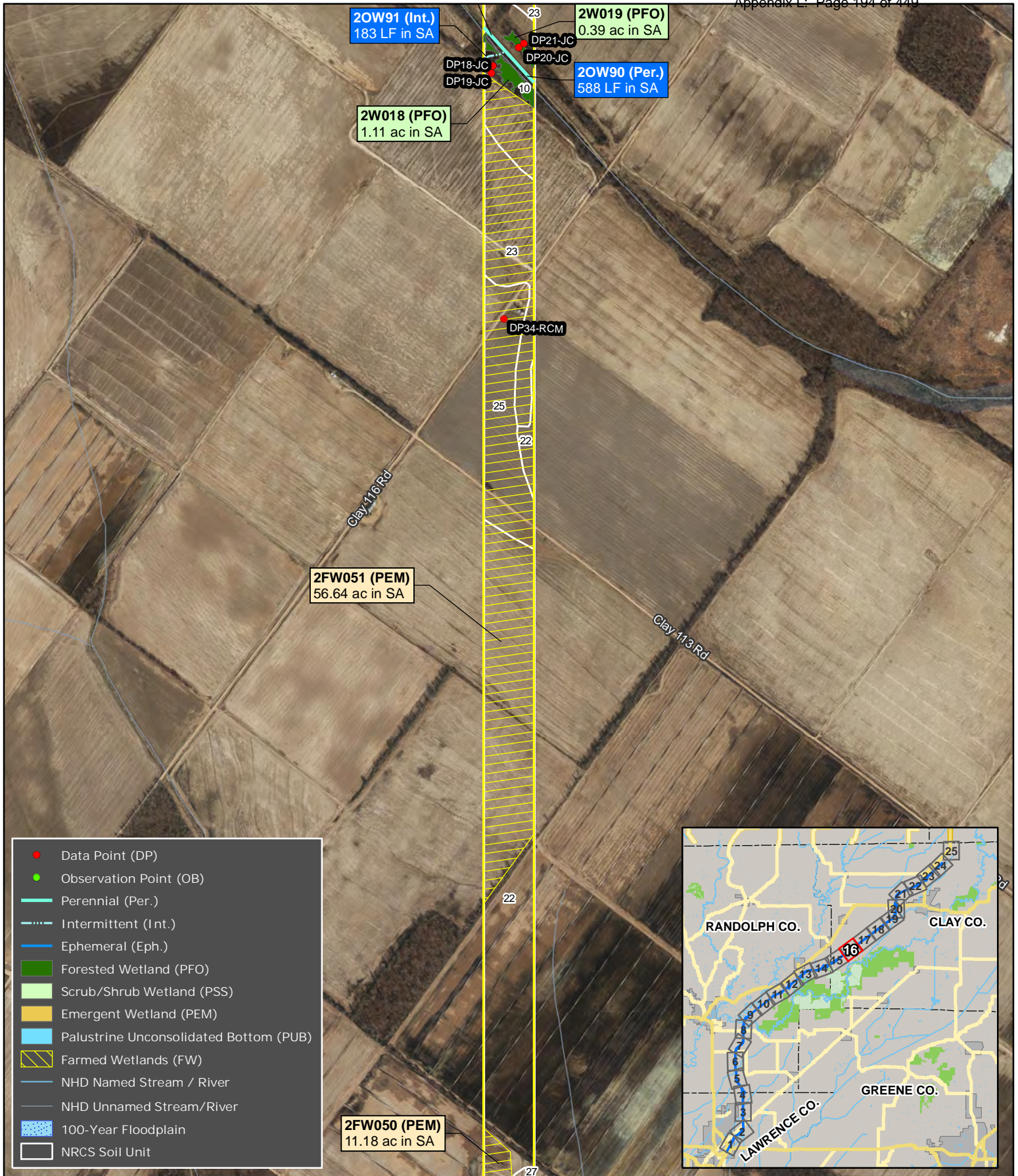


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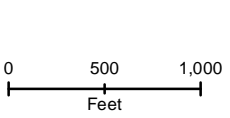
**WALNUT RIDGE - MISSOURI STATE LINE
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Randolph, Clay, and Lawrence Counties

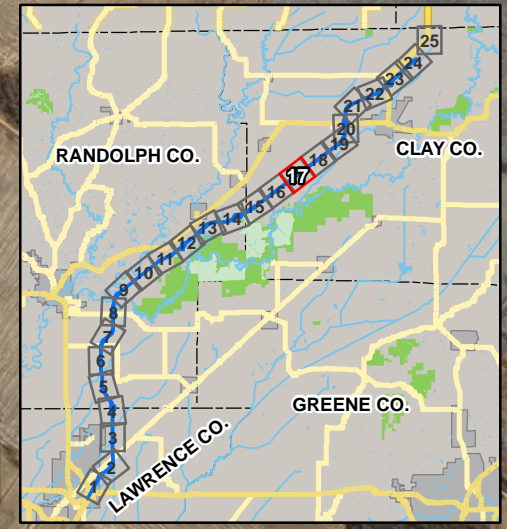
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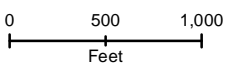
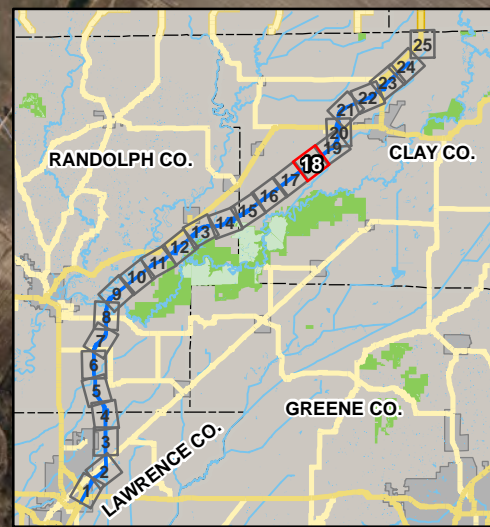
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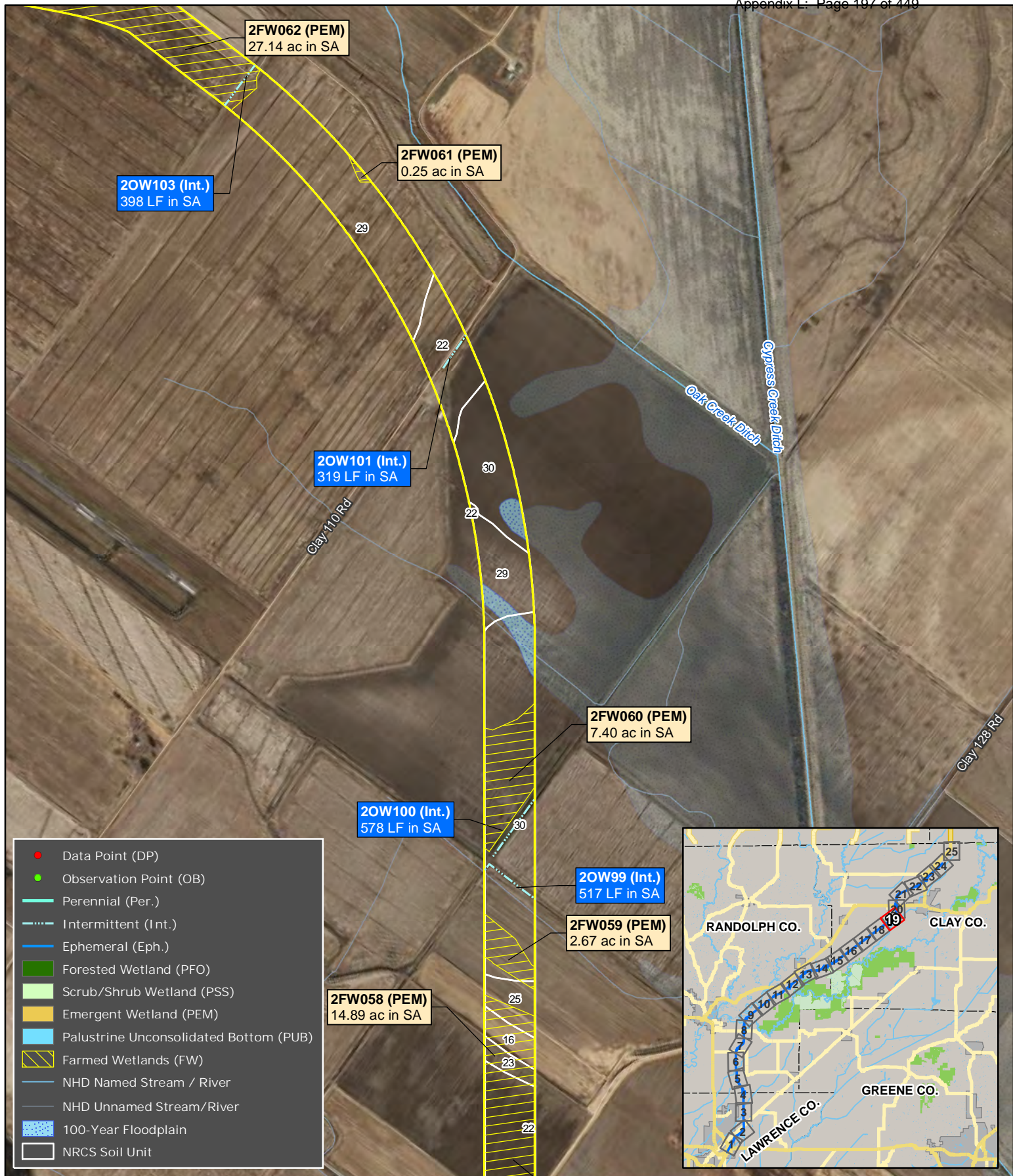
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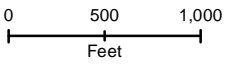
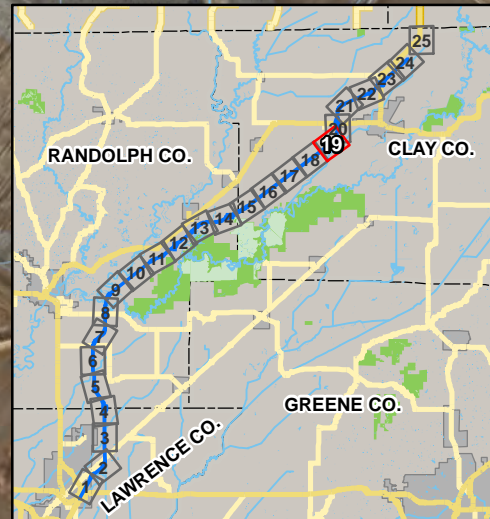
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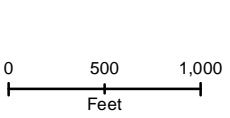
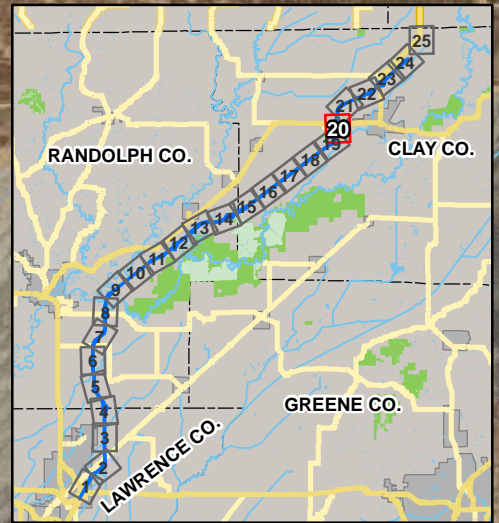
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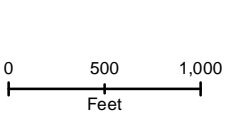
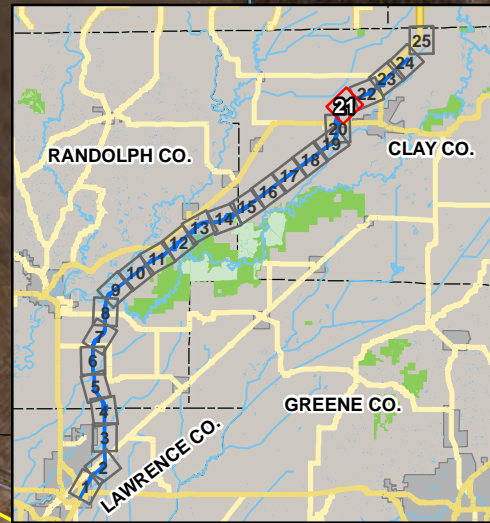
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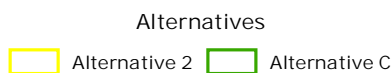
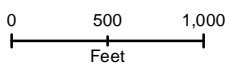
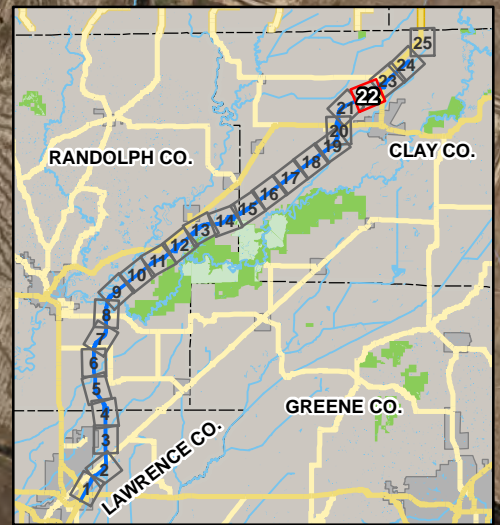
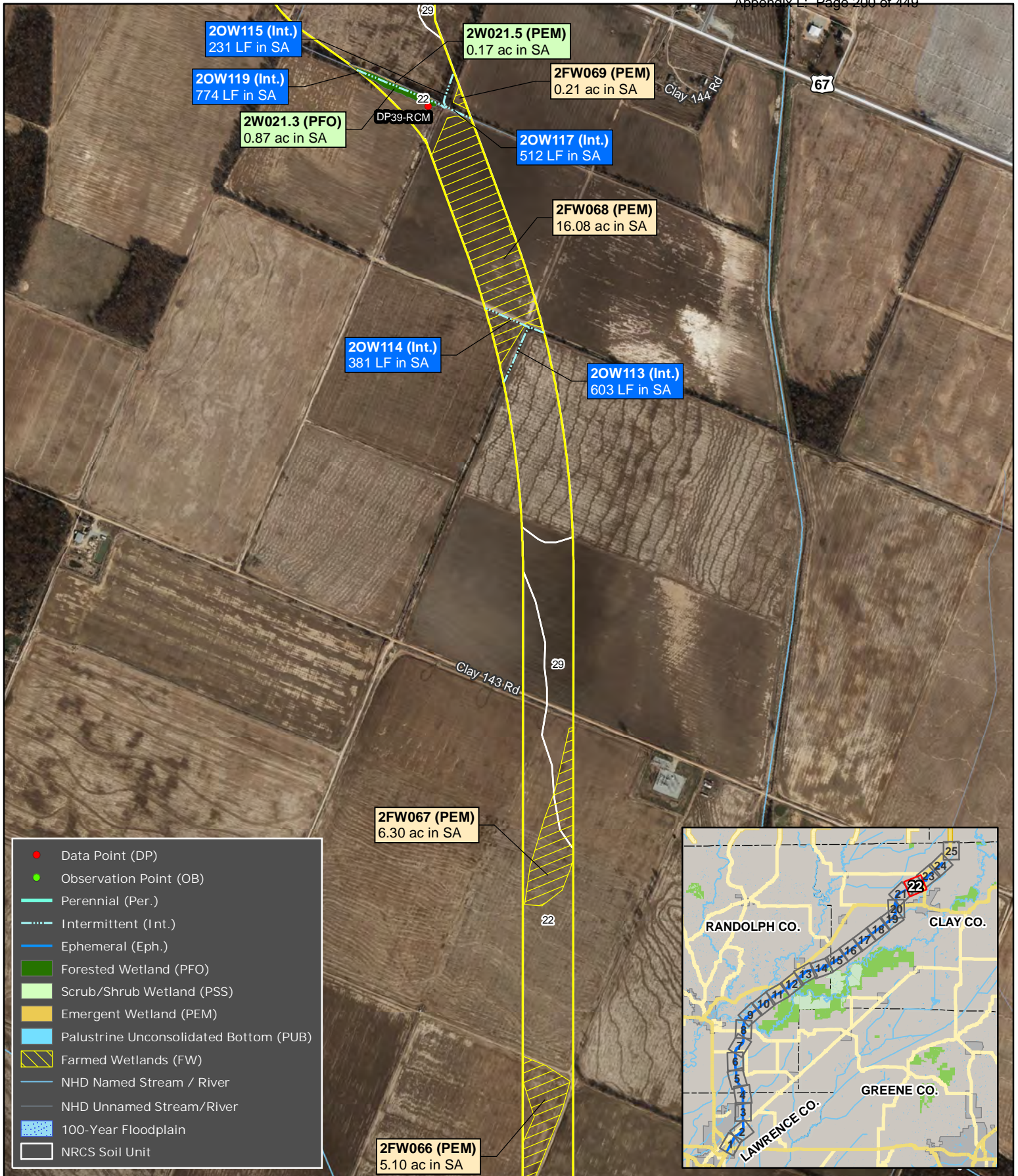


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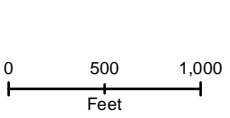
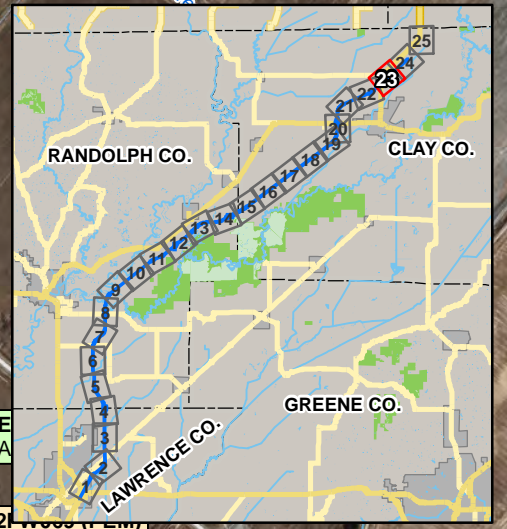


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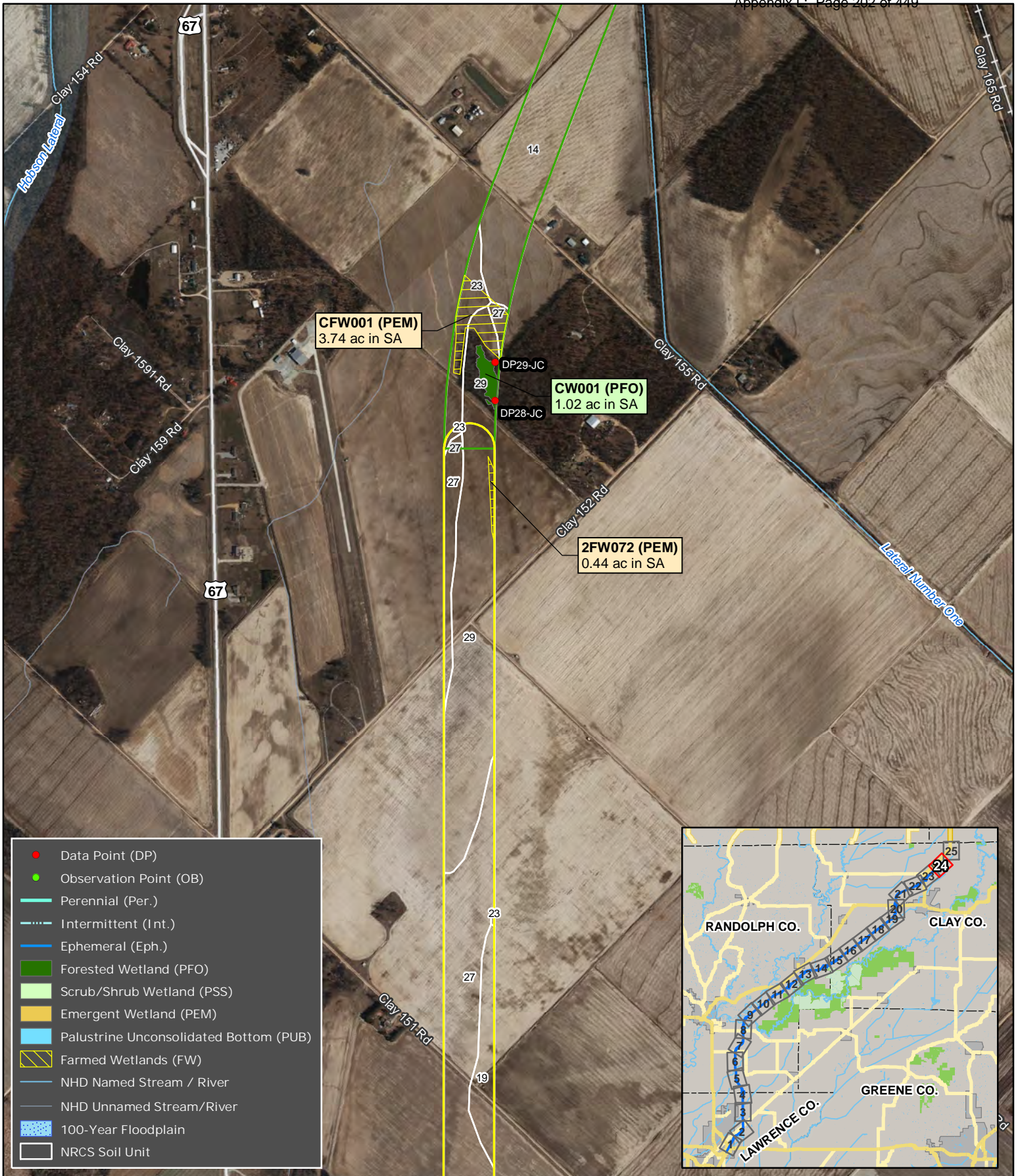


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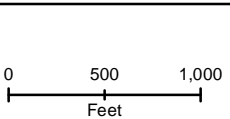
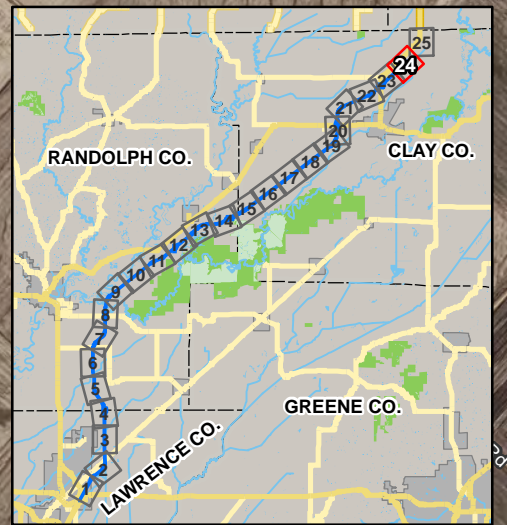
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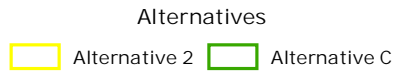
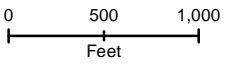
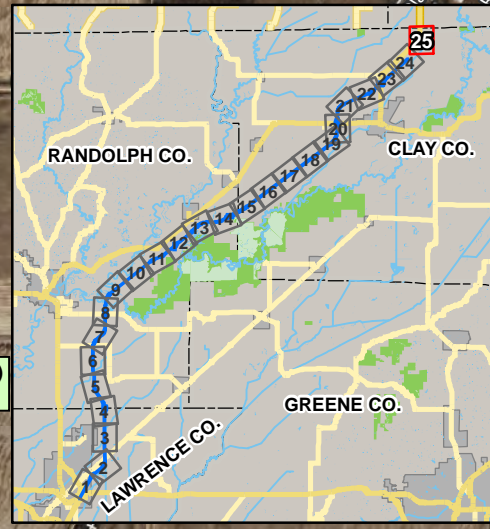
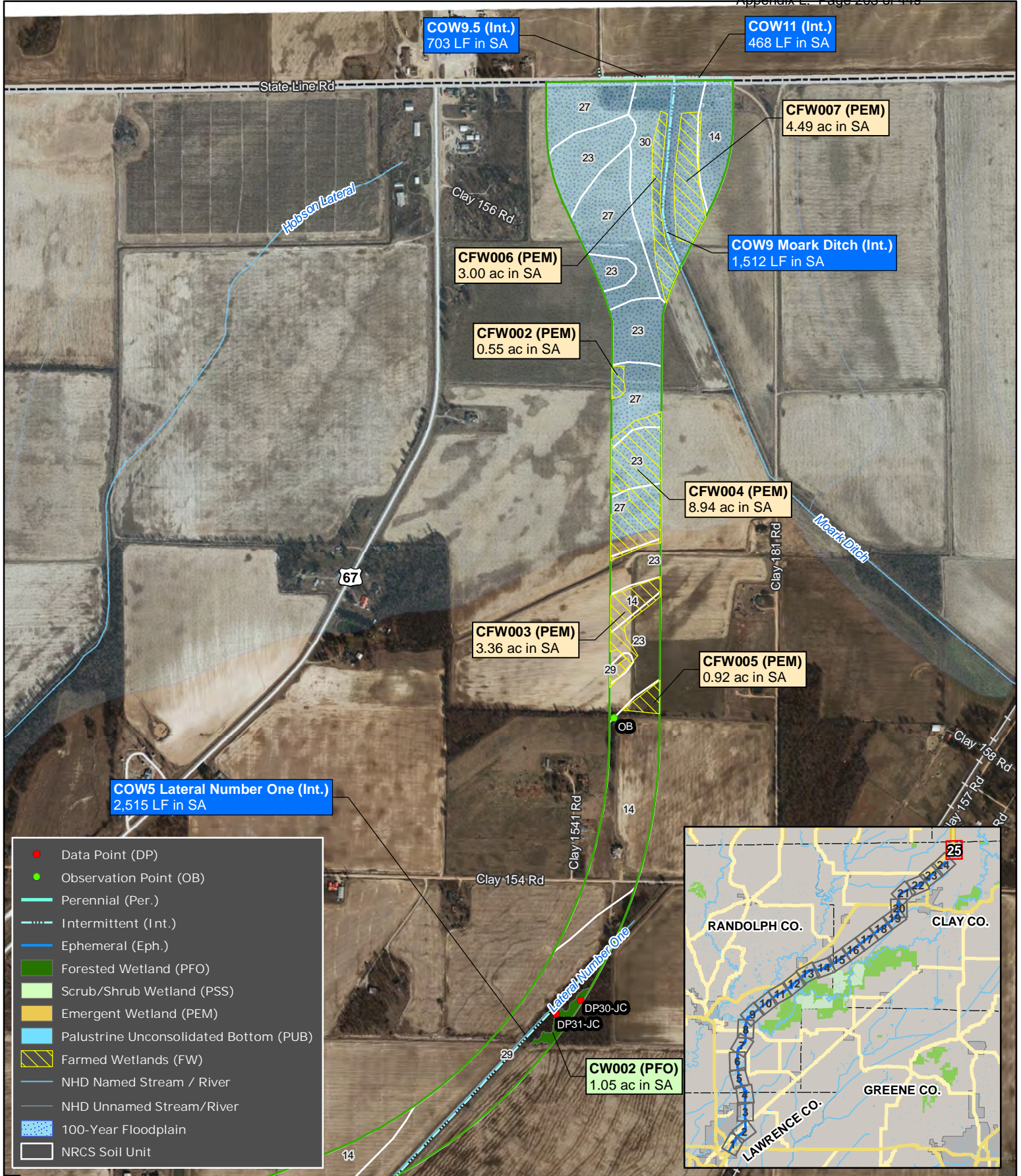


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APPENDIX C

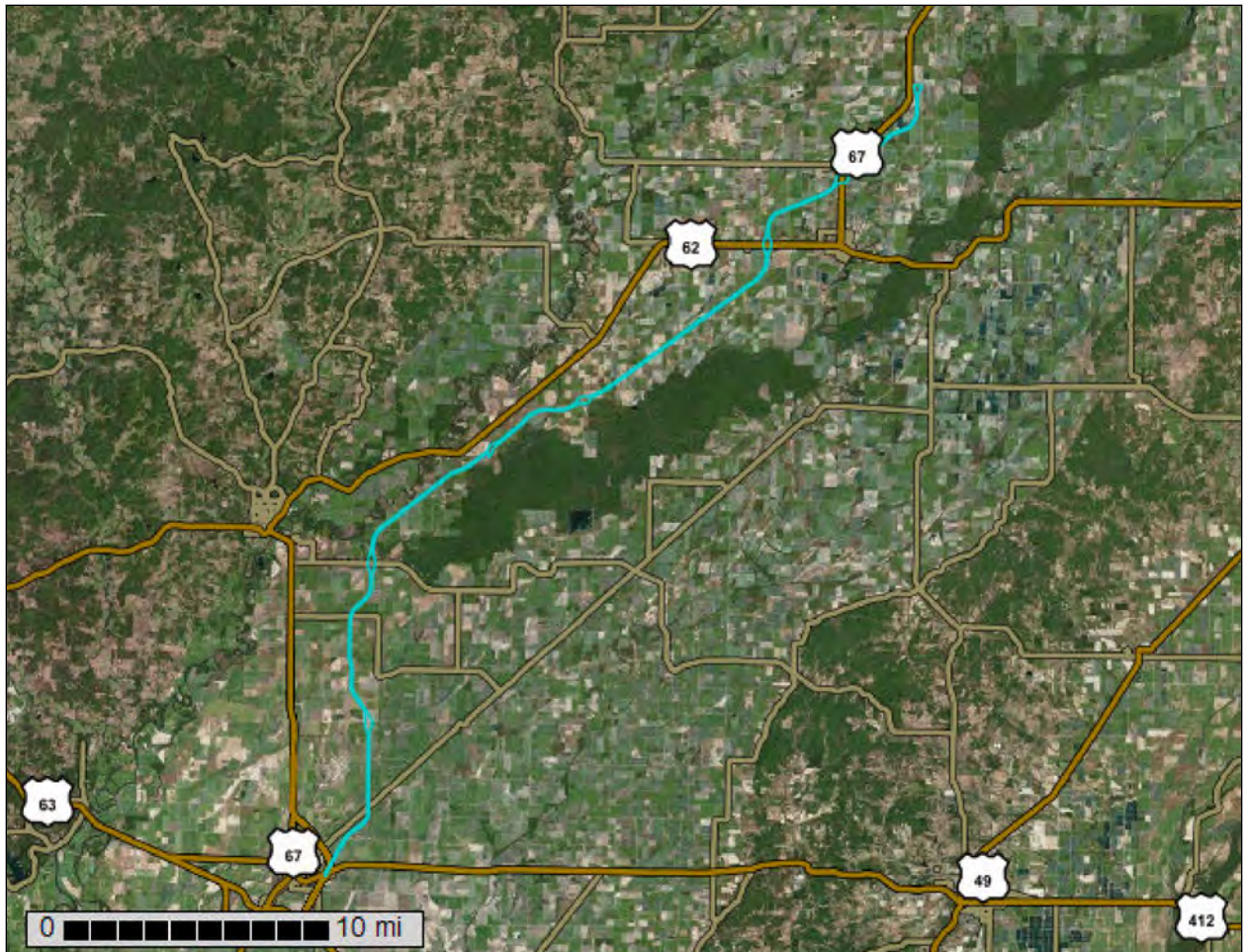
NRCS Soils Data



A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Clay County, Arkansas, Lawrence County, Arkansas, and Randolph County, Arkansas

Future I-57 (ArDOT) Job No. 100512



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

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scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

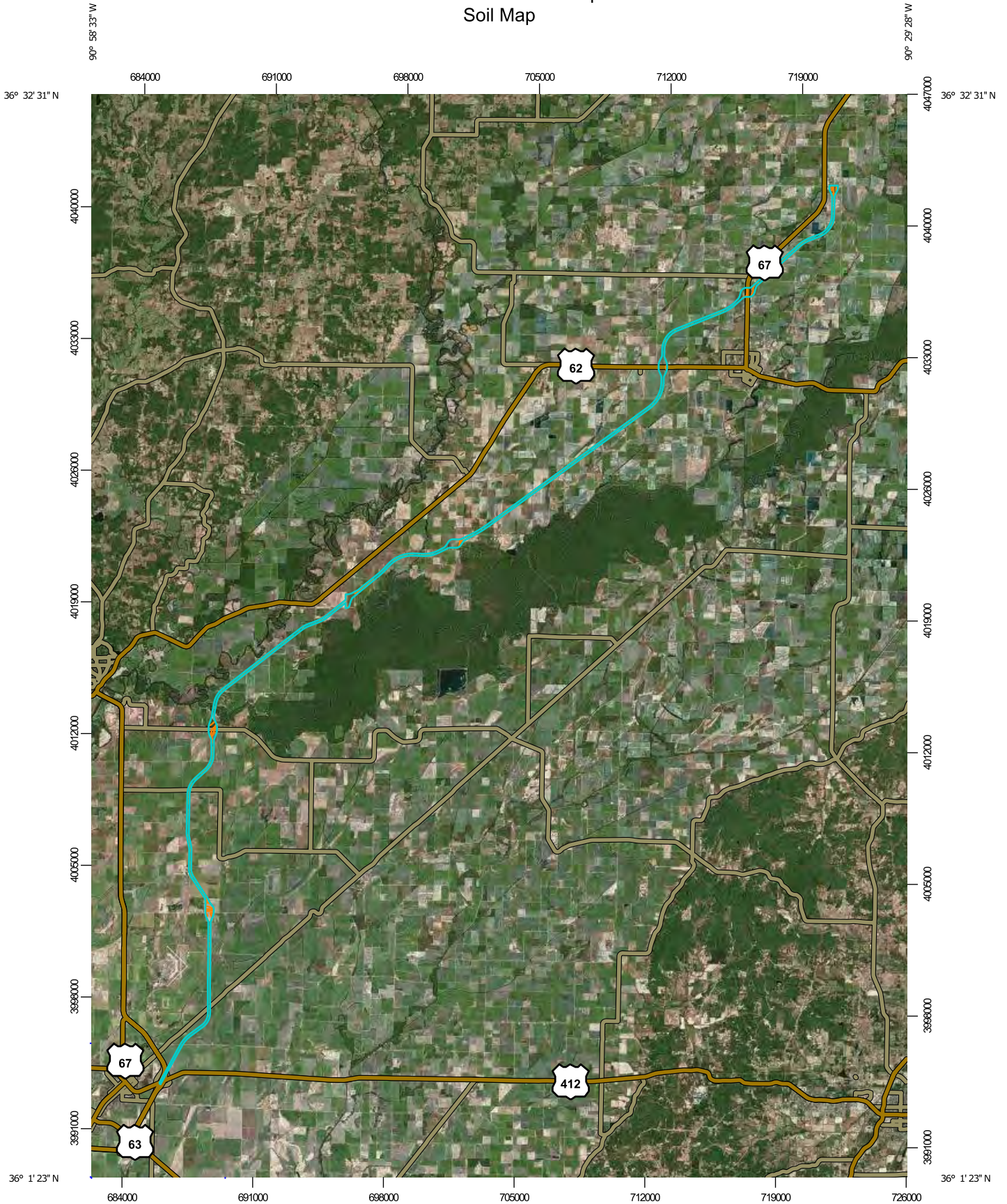
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

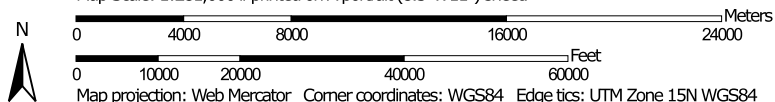
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Map Scale: 1:281,000 if printed on A portrait (8.5" x 11") sheet.



MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Clay County, Arkansas
 Survey Area Data: Version 20, Sep 13, 2021

Soil Survey Area: Lawrence County, Arkansas
 Survey Area Data: Version 18, Sep 13, 2021






































Soil Survey Area: Randolph County, Arkansas
 Survey Area Data: Version 20, Sep 13, 2021

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 1, 1999—Dec 31, 2003

MAP LEGEND

| | |
|--|---|
|  Area of Interest (AOI) |  Spoil Area |
|  Soil Map Unit Polygons |  Stony Spot |
|  Soil Map Unit Lines |  Very Stony Spot |
|  Soil Map Unit Points |  Wet Spot |
|  Special Point Features |  Other |
|  Blowout |  Special Line Features |
|  Borrow Pit |  Streams and Canals |
|  Clay Spot |  Railroads |
|  Closed Depression |  Interstate Highways |
|  Gravel Pit |  US Routes |
|  Gravelly Spot |  Major Roads |
|  Landfill |  Local Roads |
|  Lava Flow |  Aerial Photography |
|  Marsh or swamp | |
|  Mine or Quarry | |
|  Miscellaneous Water | |
|  Perennial Water | |
|  Rock Outcrop | |
|  Saline Spot | |
|  Sandy Spot | |
|  Severely Eroded Spot | |
|  Sinkhole | |
|  Slide or Slip | |
|  Sodic Spot | |

MAP LEGEND

MAP INFORMATION

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Custom Soil Resource Report

Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---------------------------------------|--|----------------|----------------|
| 10 | Amagon silt loam, 0 to 1 percent slopes | 12.7 | 0.5% |
| 14 | Bonn-Foley complex | 50.2 | 2.1% |
| 16 | Bosket fine sandy loam, undulating | 2.2 | 0.1% |
| 19 | Calhoun silt loam | 5.5 | 0.2% |
| 22 | Crowley silt loam | 343.3 | 14.3% |
| 23 | Dexter silt loam, gently undulating | 66.7 | 2.8% |
| 25 | Dundee silt loam, 0 to 1 percent slopes | 34.6 | 1.4% |
| 27 | Foley silt loam, 0 to 1 percent slopes | 123.0 | 5.1% |
| 29 | Jackport silty clay, 0 to 1 percent slopes | 316.9 | 13.2% |
| 30 | Kobel silty clay | 57.7 | 2.4% |
| Subtotals for Soil Survey Area | | 1,012.8 | 42.1% |
| Totals for Area of Interest | | 2,403.6 | 100.0% |

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---------------------------------------|--|----------------|----------------|
| Ao | Amagon silt loam | 2.1 | 0.1% |
| BoB | Bosket fine sandy loam, 0 to 3 percent slopes | 44.9 | 1.9% |
| CoA | Crowley silt loam, 0 to 1 percent slopes | 92.1 | 3.8% |
| DeB | Dubbs silt loam, 1 to 3 percent slopes | 5.0 | 0.2% |
| DvA | Dundee silt loam, 0 to 1 percent slopes | 10.7 | 0.4% |
| DvB | Dundee silt loam, gently undulating | 27.8 | 1.2% |
| FcA | Foley-Calhoun complex, 0 to 1 percent slopes | 14.9 | 0.6% |
| Ja | Jackport silty clay, 0 to 1 percent slopes | 136.6 | 5.7% |
| Pa | Patterson fine sandy loam, 0 to 1 percent slopes | 1.6 | 0.1% |
| Tu | Tuckerman fine sandy loam | 0.7 | 0.0% |
| Subtotals for Soil Survey Area | | 336.4 | 14.0% |
| Totals for Area of Interest | | 2,403.6 | 100.0% |

Custom Soil Resource Report

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---------------------------------------|--|----------------|----------------|
| 1 | Amagon silt loam | 91.5 | 3.8% |
| 4 | Bosket fine sandy loam, 0 to 3 percent slopes | 432.0 | 18.0% |
| 7 | Broseley loamy fine sand, undulating | 56.7 | 2.4% |
| 12 | Crowley silt loam | 18.7 | 0.8% |
| 16 | Dundee silt loam, 0 to 1 percent slopes | 154.3 | 6.4% |
| 24 | Kobel silty clay loam | 0.1 | 0.0% |
| 27 | McCrary fine sandy loam, 0 to 1 percent slopes | 144.4 | 6.0% |
| 28 | Patterson fine sandy loam, 0 to 1 percent slopes | 151.7 | 6.3% |
| 34 | Water | 1.5 | 0.1% |
| Subtotals for Soil Survey Area | | 1,051.0 | 43.7% |
| Totals for Area of Interest | | 2,403.6 | 100.0% |

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Hydric Rating by Map Unit (Future I-57 (ArDOT) Job No. 100512)

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

Custom Soil Resource Report

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

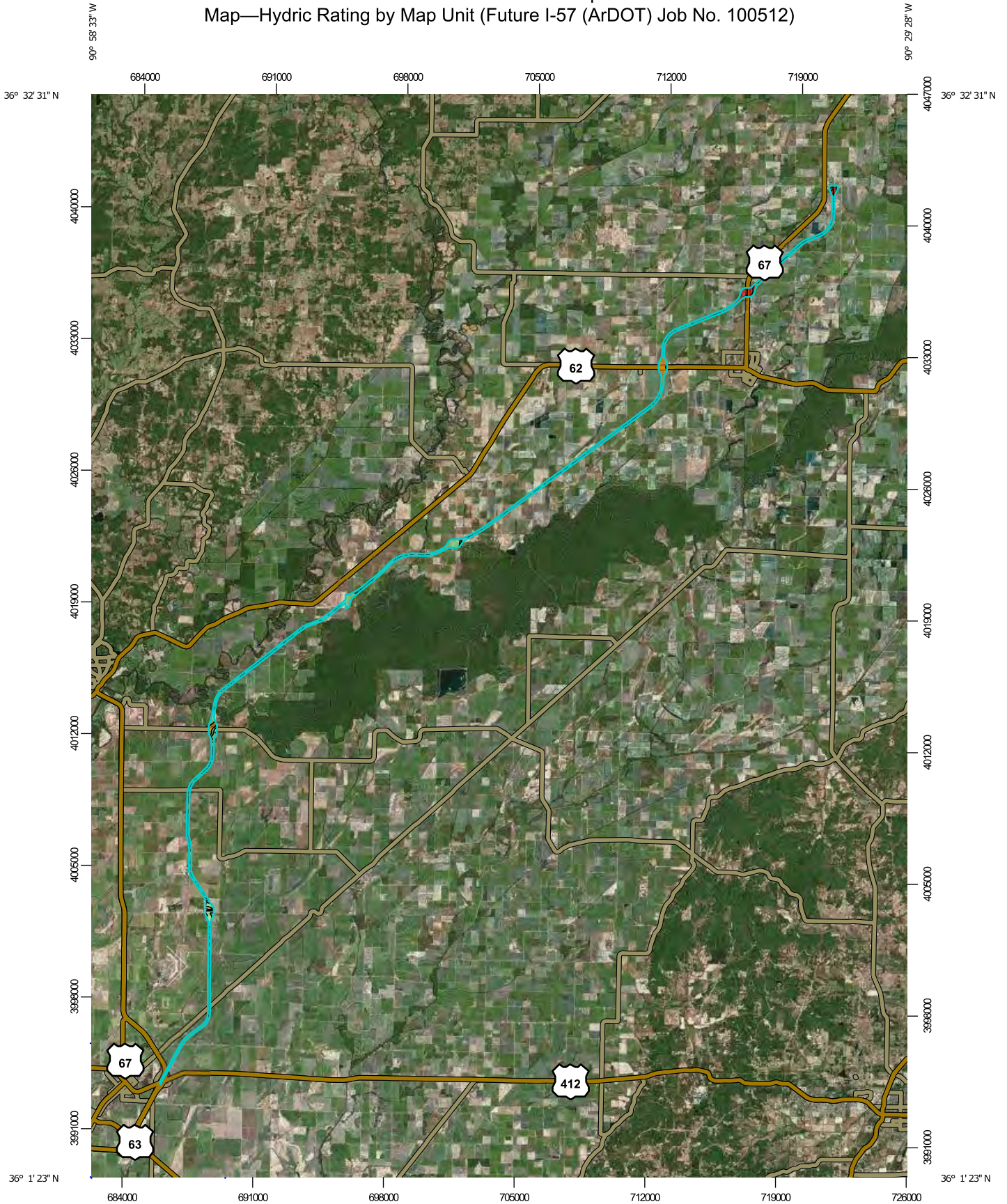
Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

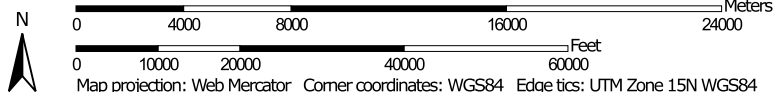
Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Custom Soil Resource Report Map—Hydric Rating by Map Unit (Future I-57 (ArDOT) Job No. 100512)

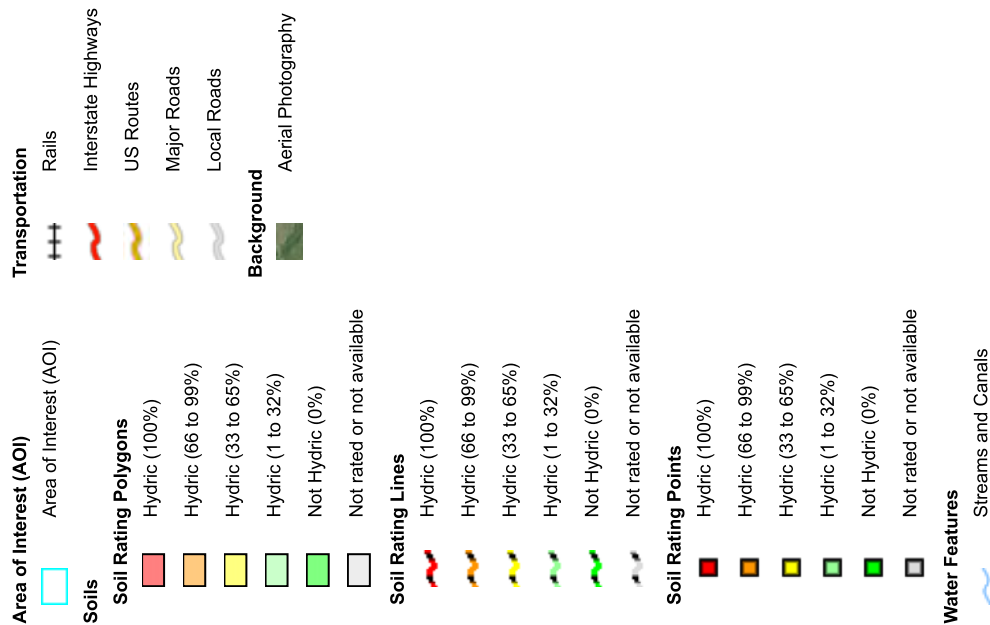


Map Scale: 1:281,000 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND



MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Clay County, Arkansas
 Survey Area Data: Version 20, Sep 13, 2021

Soil Survey Area: Lawrence County, Arkansas
 Survey Area Data: Version 18, Sep 13, 2021

Soil Survey Area: Randolph County, Arkansas
 Survey Area Data: Version 20, Sep 13, 2021

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 1, 1999—Dec 31, 2003

MAP LEGEND

MAP INFORMATION

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Custom Soil Resource Report

Table—Hydric Rating by Map Unit (Future I-57 (ArDOT) Job No. 100512)

| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
|---------------------------------------|--|--------|----------------|----------------|
| 10 | Amagon silt loam, 0 to 1 percent slopes | 100 | 12.7 | 0.5% |
| 14 | Bonn-Foley complex | 100 | 50.2 | 2.1% |
| 16 | Bosket fine sandy loam, undulating | 5 | 2.2 | 0.1% |
| 19 | Calhoun silt loam | 100 | 5.5 | 0.2% |
| 22 | Crowley silt loam | 100 | 343.3 | 14.3% |
| 23 | Dexter silt loam, gently undulating | 5 | 66.7 | 2.8% |
| 25 | Dundee silt loam, 0 to 1 percent slopes | 6 | 34.6 | 1.4% |
| 27 | Foley silt loam, 0 to 1 percent slopes | 100 | 123.0 | 5.1% |
| 29 | Jackport silty clay, 0 to 1 percent slopes | 95 | 316.9 | 13.2% |
| 30 | Kobel silty clay | 100 | 57.7 | 2.4% |
| Subtotals for Soil Survey Area | | | 1,012.8 | 42.1% |
| Totals for Area of Interest | | | 2,403.6 | 100.0% |

| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
|---------------------------------------|--|--------|----------------|----------------|
| Ao | Amagon silt loam | 95 | 2.1 | 0.1% |
| BoB | Bosket fine sandy loam, 0 to 3 percent slopes | 5 | 44.9 | 1.9% |
| CoA | Crowley silt loam, 0 to 1 percent slopes | 95 | 92.1 | 3.8% |
| DeB | Dubbs silt loam, 1 to 3 percent slopes | 4 | 5.0 | 0.2% |
| DvA | Dundee silt loam, 0 to 1 percent slopes | 6 | 10.7 | 0.4% |
| DvB | Dundee silt loam, gently undulating | 15 | 27.8 | 1.2% |
| FcA | Foley-Calhoun complex, 0 to 1 percent slopes | 95 | 14.9 | 0.6% |
| Ja | Jackport silty clay, 0 to 1 percent slopes | 95 | 136.6 | 5.7% |
| Pa | Patterson fine sandy loam, 0 to 1 percent slopes | 5 | 1.6 | 0.1% |
| Tu | Tuckerman fine sandy loam | 90 | 0.7 | 0.0% |
| Subtotals for Soil Survey Area | | | 336.4 | 14.0% |
| Totals for Area of Interest | | | 2,403.6 | 100.0% |

Custom Soil Resource Report

| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
|---------------------------------------|--|--------|----------------|----------------|
| 1 | Amagon silt loam | 90 | 91.5 | 3.8% |
| 4 | Bosket fine sandy loam, 0 to 3 percent slopes | 5 | 432.0 | 18.0% |
| 7 | Broseley loamy fine sand, undulating | 10 | 56.7 | 2.4% |
| 12 | Crowley silt loam | 100 | 18.7 | 0.8% |
| 16 | Dundee silt loam, 0 to 1 percent slopes | 6 | 154.3 | 6.4% |
| 24 | Kobel silty clay loam | 100 | 0.1 | 0.0% |
| 27 | McCrary fine sandy loam, 0 to 1 percent slopes | 94 | 144.4 | 6.0% |
| 28 | Patterson fine sandy loam, 0 to 1 percent slopes | 5 | 151.7 | 6.3% |
| 34 | Water | 0 | 1.5 | 0.1% |
| Subtotals for Soil Survey Area | | | 1,051.0 | 43.7% |
| Totals for Area of Interest | | | 2,403.6 | 100.0% |

Rating Options—Hydric Rating by Map Unit (Future I-57 (ArDOT) Job No. 100512)

Aggregation Method: Percent Present

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Percent Present" returns the cumulative percent composition of all components of a map unit for which a certain condition is true. For example, attribute "Hydric Rating by Map Unit" returns the cumulative percent composition of all components of a map unit where the corresponding hydric rating is "Yes". Conditions may be simple or complex. At runtime, the user may be able to specify all, some or none of the conditions in question.

Component Percent Cutoff: None Specified

Custom Soil Resource Report

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Lower

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
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- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf



APPENDIX D

Data Forms



| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Walnut Ridge/Lawrence Sampling Date: 7/18/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 1 - JC
 Investigator(s): Colby Marshall, Joe Rujawitz Section, Township, Range: S36 T17N R1E
 Landform (hillside, terrace, etc.): ditch Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR or MLRA): LRR O Lat: 36.068735° Long: -90.934942° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Site meets all three criteria and is considered a wetland. | |

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u>X</u> No <u> </u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 1 - JC

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | 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 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. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>5'x30'</u>) | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ _____ |
| 1. <u>Juncus effusus</u> | 70 | Yes | OBL | |
| 2. <u>Typha sp.*</u> | 30 | Yes | OBL | |
| 3. <u>Juncus diffusissimus</u> | 10 | No | FACW | |
| 4. <u>Persicaria sp.*</u> | 10 | No | OBL | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| 120 = Total Cover | | | | |
| 50% of total cover: <u>60</u> | | 20% of total cover: <u>24</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 1 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|---|--|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-1 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | |
| 1-10 | 10YR 4/1 | 94 | 10YR 5/8 | 6 | C | PL | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
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| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Remarks: Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Walnut Ridge/Lawrence Sampling Date: 7/18/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 2 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S36 T17N R1E
 Landform (hillside, terrace, etc.): drainage edge Local relief (concave, convex, none): convex Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.068723° Long: -90.934911° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Site does not meet all three criteria and is not a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 2 - JC

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | 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 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. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>5' x 30'</u>) | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 1. <u>Paspalum notatum</u> | 90 | Yes | FACU | |
| 2. <u>Baccharis halimifolia</u> | 5 | No | FAC | |
| 3. <u>Ambrosia artemisiifolia</u> | 10 | No | FACU | |
| 4. <u>Fraxinus pennsylvanica</u> | 5 | No | FACW | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| 110 = Total Cover | | | | |
| 50% of total cover: <u>55</u> | | 20% of total cover: <u>22</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 2 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|---|--|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-1 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | |
| 1-3 | 10YR 4/3 | 96 | 10YR 5/6 | 4 | C | PL | Loamy/Clayey | Distinct redox concentrations |
| 3-8 | 10YR 5/1 | 96 | 10YR 5/8 | 4 | C | PL | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | <input type="checkbox"/> (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | <input type="checkbox"/> (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | <input type="checkbox"/> (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | <input type="checkbox"/> (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | <input type="checkbox"/> (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | <input type="checkbox"/> (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | <input type="checkbox"/> (MLRA 149A, 153C, 153D) | | | | | |
| <input type="checkbox"/> (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | <input type="checkbox"/> (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Remarks: Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Walnut Ridge/Lawrence Sampling Date: 7/18/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 3 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S36 T17N R1E
 Landform (hillside, terrace, etc.): field Local relief (concave, convex, none): concave Slope (%): >0%
 Subregion (LRR or MLRA): LRR O Lat: 36.070272° Long: -90.932982° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Sites meets all three criteria and is a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u>X</u> No <u> </u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 3 - JC

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | 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 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. |
| 1. <u>Juncus effusus</u> | 70 | Yes | OBL | |
| 2. <u>Hibiscus grandiflorus</u> | 30 | Yes | OBL | |
| 3. <u>Juncus diffusissimus</u> | 5 | No | FACW | |
| 4. <u>Andropogon glomeratus</u> | 5 | No | FACW | |
| 5. <u>Solidago gigantea</u> | 5 | No | FACU | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 115 = Total Cover | | | | |
| 50% of total cover: <u>58</u> | | 20% of total cover: <u>23</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 Site meets hydrophytic vegetation criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Walnut Ridge/Lawrence Sampling Date: 7/18/2022
 Applicant/Owner: Arkansas Department of Transportation State: AR Sampling Point: DP 4 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S36 T17N R1E
 Landform (hillside, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.072088° Long: -90.931706° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Stream to wetland. Site meets all three criteria and is a wetland. | |

HYDROLOGY

| | |
|---|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 4 - JC

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u>) | | | | |
| 1. <u>Cephalanthus occidentalis</u> | <u>5</u> | <u>Yes</u> | <u>OBL</u> | Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>3</u> | | 20% of total cover: <u>1</u> | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | |
| 1. <u>Juncus effusus</u> | <u>40</u> | <u>Yes</u> | <u>OBL</u> | ¹ 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. |
| 2. <u>Hibiscus grandiflorus</u> | <u>30</u> | <u>Yes</u> | <u>OBL</u> | |
| 3. <u>Carex lupulina</u> | <u>30</u> | <u>Yes</u> | <u>OBL</u> | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | Hydrophytic Vegetation Present? Yes <u>X</u> No _____ |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 Site meets hydrophytic vegetation criteria.

| | |
|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|--|

Project/Site: Highway 67 EIS City/County: Walnut Ridge/Lawrence Sampling Date: 7/18/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 5 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S36 T17N R1E
 Landform (hillside, terrace, etc.): field Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.072249° Long: -90.931602° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Site meets all three criteria and is a wetland. | |

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 5 - JC

| | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|--|--|
| Tree Stratum (Plot size: _____) | | | | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| Sapling/Shrub Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u>Baccharis halimifolia</u> | <u>15</u> | <u>Yes</u> | | <u>FAC</u> |
| 2. _____ | _____ | _____ | | _____ |
| 3. _____ | _____ | _____ | | _____ |
| 4. _____ | _____ | _____ | | _____ |
| 5. _____ | _____ | _____ | | _____ |
| 6. _____ | _____ | _____ | | _____ |
| 7. _____ | _____ | _____ | | _____ |
| 8. _____ | _____ | _____ | _____ | |
| <u>15</u> = Total Cover | | | Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 50% of total cover: <u>8</u> | | 20% of total cover: <u>3</u> | | |
| Herb Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u>Carex sp.*</u> | <u>60</u> | <u>Yes</u> | | <u>FACW</u> |
| 2. <u>Juncus diffusissimus</u> | <u>20</u> | <u>No</u> | | <u>FACW</u> |
| 3. <u>Solidago altissima</u> | <u>15</u> | <u>No</u> | | <u>FACU</u> |
| 4. <u>Solanum carolinense</u> | <u>10</u> | <u>No</u> | | <u>FACU</u> |
| 5. <u>Andropogon glomeratus</u> | <u>10</u> | <u>No</u> | | <u>FACW</u> |
| 6. _____ | _____ | _____ | | _____ |
| 7. _____ | _____ | _____ | | _____ |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| <u>115</u> = Total Cover | | | 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 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. | |
| 50% of total cover: <u>58</u> | | 20% of total cover: <u>23</u> | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | | _____ |
| 2. _____ | _____ | _____ | | _____ |
| 3. _____ | _____ | _____ | | _____ |
| 4. _____ | _____ | _____ | | _____ |
| 5. _____ | _____ | _____ | | _____ |
| _____ = Total Cover | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 5 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|----------------|---|-------------------|------------------|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 10YR 4/2 | 100 | | | | | Loamy/Clayey | |
| 2-6 | 10YR 5/2 | 94 | 10YR 5/6 | 6 | C | PL | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

| | | |
|---|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | (MLRA 153B, 153D) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | (outside MLRA 150A) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | (outside MLRA 150A, 150B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) | (MLRA 153B) |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | (outside MLRA 138, 152A in FL, 154) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | (MLRA 153B, 153D) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) | |
| (LRR S, T, U) | <input type="checkbox"/> Very Shallow Dark Surface (F22) | |
| | (MLRA 138, 152A in FL, 154) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Site meets hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Walnut Ridge/Lawrence Sampling Date: 7/18/2022
 Applicant/Owner: Arkansas Department of Transportation State: AR Sampling Point: DP 6 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S36 T17N R1E
 Landform (hillside, terrace, etc.): field Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.071642° Long: -90.932173° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Site does not meet all three criteria and is not a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria,

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

Sampling Point: DP 6 - JC

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|---|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. <u>Trifolium repens</u> | <u>70</u> | <u>Yes</u> | <u>FACU</u> | |
| 2. <u>Sorghum halepense</u> | <u>30</u> | <u>Yes</u> | <u>FACU</u> | |
| 3. <u>Solidago altissima</u> | <u>10</u> | <u>No</u> | <u>FACU</u> | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>55</u> | | 20% of total cover: <u>22</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:
Tree – Woody plants, excluding vines, 3 in. (7.6 cm) 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 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 _____ No X

Remarks: (If observed, list morphological adaptations below.)
 Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 6 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|---|---|---|---------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-6 | 10YR 4/2 | 100 | | | | | Sandy | |
| 6-10 | 10YR 5/2 | 94 | 10YR 5/8 | 6 | C | PL | Sandy | Prominent redox concentrations |
| 10-16 | 10YR 6/2 | 94 | 10YR 5/6 | 6 | C | PL | Sandy | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input checked="" type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | |
| Remarks: Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Walnut Ridge/Lawrence Sampling Date: 7/18/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 7 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S36 T17N R1E
 Landform (hillside, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 1%
 Subregion (LRR or MLRA): LRR O Lat: 36.070734° Long: -90.932519° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Site meets all three criteria and is a wetland. | |

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 7 - JC

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | 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 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. |
| 1. <u>Cyperus esculentus</u> | <u>60</u> | <u>Yes</u> | <u>FAC</u> | |
| 2. <u>Persicaria sp.*</u> | <u>20</u> | <u>Yes</u> | <u>OBL</u> | |
| 3. <u>Hibiscus grandiflorus</u> | <u>20</u> | <u>Yes</u> | <u>OBL</u> | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site meets hydrophytic vegetation criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Walnut Ridge/Lawrence Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 8 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S18 T17N R2E
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.103622° Long: -90.905906° Datum: WGS 84
 Soil Map Unit Name: Crowley silt loam, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Site meets all three criteria and is a wetland. | |

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: <u> </u> Primary Indicators (minimum of one is required; check all that apply) | <u> </u> Secondary Indicators (minimum of two required) |
| <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u>X</u> No <u> </u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 8 - JC

| <u>Tree Stratum</u> (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|-------------------------------|-------------------|------------------|--|
| 1. <u>Quercus phellos</u> | <u>70</u> | Yes | FACW | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| <u>70</u> =Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: <u>35</u> | 20% of total cover: <u>14</u> | | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>) | | | | Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. <u>Celtis occidentalis</u> | <u>15</u> | Yes | FAC | |
| 2. <u>Fraxinus pennsylvanica</u> | <u>15</u> | Yes | FACW | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| <u>30</u> =Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: <u>15</u> | 20% of total cover: <u>6</u> | | | |
| <u>Herb Stratum</u> (Plot size: <u>5'</u>) | | | | 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 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. |
| 1. <u>Toxicodendron radicans</u> | <u>10</u> | Yes | FAC | |
| 2. <u>Fraxinus pennsylvanica</u> | <u>5</u> | Yes | FACW | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| <u>15</u> =Total Cover | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| 50% of total cover: <u>8</u> | 20% of total cover: <u>3</u> | | | |
| <u>Woody Vine Stratum</u> (Plot size: <u>30'</u>) | | | | |
| 1. <u>Campsis radicans</u> | <u>10</u> | Yes | FAC | |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| <u>10</u> =Total Cover | | | | |
| 50% of total cover: <u>5</u> | 20% of total cover: <u>2</u> | | | |

Remarks: (If observed, list morphological adaptations below.)
 Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 8 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|---|---|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-1 | 10YR 3/1 | 100 | | | | | Loamy/Clayey | |
| 1-4 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | |
| 4-8 | 10YR 5/2 | 96 | 10YR 5/6 | 4 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 8-11 | 10YR 4/1 | 96 | 10YR 4/6 | 4 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Remarks: Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Walnut Ridge/Arkansas Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 9 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S18 T17N R2E
 Landform (hillside, terrace, etc.): forested flat Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.103531° Long: -90.905896° Datum: WGS 84
 Soil Map Unit Name: Crowley silt loam, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Site does not meet all three criteria and is not in a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 9 - JC

| | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|---------------------|-------------------------------|---------------------|---|
| Tree Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u><i>Diospyros virginiana</i></u> | <u>60</u> | Yes | FAC | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>57.1%</u> (A/B) Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 60 =Total Cover | | | | |
| 50% of total cover: <u>30</u> | | 20% of total cover: <u>12</u> | | |
| Sapling/Shrub Stratum (Plot size: <u>15'</u>) | | | | |
| 1. <u><i>Ulmus rubra</i></u> | <u>30</u> | Yes | FAC | Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 30 =Total Cover | | | | |
| 50% of total cover: <u>15</u> | | 20% of total cover: <u>6</u> | | |
| Herb Stratum (Plot size: <u>5'</u>) | | | | |
| 1. <u><i>Euonymus fortunei</i></u> | <u>30</u> | Yes | UPL | ¹ 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 2. <u><i>Toxicodendron radicans</i></u> | <u>20</u> | Yes | FAC | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| 50 =Total Cover | | | | |
| 50% of total cover: <u>25</u> | | 20% of total cover: <u>10</u> | | |
| Woody Vine Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u><i>Campsis radicans</i></u> | <u>40</u> | Yes | FAC | |
| 2. <u><i>Euonymus fortunei</i></u> | <u>20</u> | Yes | UPL | |
| 3. <u><i>Lonicera japonica</i></u> | <u>20</u> | Yes | FACU | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 80 =Total Cover | | | | |
| 50% of total cover: <u>40</u> | | 20% of total cover: <u>16</u> | | |

Remarks: (If observed, list morphological adaptations below.)
 Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 9 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|---|---|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-1 | 10YR 4/3 | 100 | | | | | Loamy/Clayey | |
| 1-4 | 10YR 5/2 | 100 | | | | | Loamy/Clayey | |
| 4-8 | 10YR 4/2 | 94 | 10YR 4/6 | 6 | C | PL | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Remarks: Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Walnut Ridge/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation State: AR Sampling Point: DP 10 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S30 T18N R2E
 Landform (hillside, terrace, etc.): agricultural field Local relief (concave, convex, none): concave Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.172539° Long: -90.916877° Datum: WGS 84
 Soil Map Unit Name: Patterson fine sandy loam, 0 to 1 percent slopes NWI classification: n/a
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes No X
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Vegetation and hydrology disturbed by farming. Hydrology significantly altered by nearby drainage canals. Aerial imagery shows frequent saturation and soil sampling yielded hydric soils. Based on best available data, the area is a farmed wetland. | |

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria. Site disturbed by farming.

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

Sampling Point: DP 10 - JC

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | |
|---|------------------|-------------------|------------------|---|-------------------|--------------|----------------------|----------------|-----------------------|----------------|----------------------|----------------|-----------------------|----------------|-----------------------|------------------|------------------------------|----------------|--------------------------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>90</u></td> <td>x 5 = <u>450</u></td> </tr> <tr> <td>Column Totals: <u>90</u> (A)</td> <td><u>450</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>5.00</u></td> </tr> </table> | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>0</u> | x 2 = <u>0</u> | FAC species <u>0</u> | x 3 = <u>0</u> | FACU species <u>0</u> | x 4 = <u>0</u> | UPL species <u>90</u> | x 5 = <u>450</u> | Column Totals: <u>90</u> (A) | <u>450</u> (B) | Prevalence Index = B/A = <u>5.00</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FACW species <u>0</u> | x 2 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FAC species <u>0</u> | x 3 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FACU species <u>0</u> | x 4 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| UPL species <u>90</u> | x 5 = <u>450</u> | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>90</u> (A) | <u>450</u> (B) | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>5.00</u> | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: _____ 20% of total cover: _____ | | | | | | | | | | | | | | | | | | | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: _____ 20% of total cover: _____ | | | | | | | | | | | | | | | | | | | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Glycine max</u> | <u>90</u> | <u>Yes</u> | <u>UPL</u> | ¹ 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 9. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 10. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 11. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 12. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>45</u> 20% of total cover: <u>18</u> | | | | | | | | | | | | | | | | | | | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: _____ 20% of total cover: _____ | | | | | | | | | | | | | | | | | | | | |

Remarks: (If observed, list morphological adaptations below.)
 Site disturbed by farming.

SOIL

Sampling Point: DP 10 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|---|---|---|---------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-3 | 10YR 4/3 | 100 | | | | | Sandy | |
| 3-6 | 10YR 4/2 | 94 | 10YR 5/6 | 6 | C | | Sandy | Prominent redox concentrations |
| 6-10 | 10YR 4/1 | 92 | 10YR 5/6 | 8 | C | | Sandy | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input checked="" type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Remarks: Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Walnut Ridge/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 11 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S30 T18N R2E
 Landform (hillside, terrace, etc.): ditch Local relief (concave, convex, none): convex Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.172424° Long: -90.916912° Datum: WGS 84
 Soil Map Unit Name: Patterson fine sandy loam, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: Site does not meet all three criteria and is not in a wetland. | |

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 11 - JC

| | Absolute % Cover | Dominant Species? | Indicator Status | | | | |
|--|---------------------|-------------------------------|---------------------|--|--|-----------|-------------|
| Tree Stratum (Plot size: <u>30'</u>) | | | | | | | |
| 1. <u>Quercus phellos</u> | <u>70</u> | Yes | FACW | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40.0%</u> (A/B) | | | |
| 2. _____ | | | | | | | |
| 3. _____ | | | | | | | |
| 4. _____ | | | | | | | |
| 5. _____ | | | | | | | |
| 6. _____ | | | | | | | |
| 7. _____ | | | | | | | |
| 8. _____ | | | | | | | |
| <u>70</u> =Total Cover | | | | | | | |
| 50% of total cover: <u>35</u> | | 20% of total cover: <u>14</u> | | | | | |
| Sapling/Shrub Stratum (Plot size: <u>15'</u>) | | | | | | | |
| 1. <u>Morus alba</u> | <u>18</u> | Yes | FACU | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ | | | |
| 2. _____ | | | | | | | |
| 3. _____ | | | | | | | |
| 4. _____ | | | | | | | |
| 5. _____ | | | | | | | |
| 6. _____ | | | | | | | |
| 7. _____ | | | | | | | |
| 8. _____ | | | | | | | |
| <u>18</u> =Total Cover | | | | | | | |
| 50% of total cover: <u>9</u> | | 20% of total cover: <u>4</u> | | | | | |
| Herb Stratum (Plot size: <u>5'</u>) | | | | | | | |
| 1. <u>Ambrosia trifida</u> | <u>50</u> | Yes | FAC | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) | | | |
| 2. <u>Phytolacca americana</u> | <u>30</u> | Yes | FACU | | | | |
| 3. <u>Perilla frutescens</u> | <u>20</u> | Yes | FACU | | | | |
| 4. _____ | | | | | | | |
| 5. _____ | | | | | | | |
| 6. _____ | | | | | | | |
| 7. _____ | | | | | | | |
| 8. _____ | | | | | | | |
| 9. _____ | | | | | | | |
| 10. _____ | | | | | | | |
| 11. _____ | | | | | | | |
| 12. _____ | | | | | | | |
| <u>100</u> =Total Cover | | | | | | | |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | | | | |
| Woody Vine Stratum (Plot size: <u>30'</u>) | | | | | | | |
| 1. _____ | | | | 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 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. | | | |
| 2. _____ | | | | | | | |
| 3. _____ | | | | | | | |
| 4. _____ | | | | | | | |
| 5. _____ | | | | | | | |
| _____ =Total Cover | | | | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | | | | |
| Hydrophytic Vegetation Present? <table style="width:100%; border:none;"> <tr> <td style="width:60%;"></td> <td style="text-align:center;">Yes _____</td> <td style="text-align:center;">No <u>X</u></td> </tr> </table> | | | | | | Yes _____ | No <u>X</u> |
| | Yes _____ | No <u>X</u> | | | | | |

Remarks: (If observed, list morphological adaptations below.)
 Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 11 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|----------------|---|-------------------|------------------|--------------|---------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-8 | 10YR 4/2 | 100 | | | | | Loamy/Clayey | |
| 8-16 | 10YR 5/3 | 100 | | | | | Loamy/Clayey | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (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 (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)**
- Polyvalue Below Surface (S8) **(LRR S, T, U)**
- Thin Dark Surface (S9) **(LRR S, T, U)**
- Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- Loamy Mucky Mineral (F1) **(LRR O)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) **(LRR U)**
- Depleted Ochric (F11) **(MLRA 151)**
- Iron-Manganese Masses (F12) **(LRR O, P, T)**
- Umbric Surface (F13) **(LRR P, T, U)**
- Delta Ochric (F17) **(MLRA 151)**
- Reduced Vertic (F18) **(MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) **(LRR O)**
- 2 cm Muck (A10) **(LRR S)**
- Coast Prairie Redox (A16) **(outside MLRA 150A)**
- Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(LRR P, T)**
- Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Site does not meet hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Biggers/Randolph Sampling Date: 7/18/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 12 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S12 T19N R2E
 Landform (hillside, terrace, etc.): agricultural field Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.308523° Long: -90.810863° Datum: WGS 84
 Soil Map Unit Name: Bosket fine sandy loam, 0 to 3 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes No X
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Vegetation and hydrology significantly disturbed by farming. Hydrology is significantly altered by nearby drainage canals. Aerial imagery shows frequent saturation and soil sampling yielded hydric soils. Based on best available data, the area is a farmed wetland. | |

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 12 - JC

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | |
|---|------------------|-------------------|------------------|---|-------------------|--------------|----------------------|----------------|-----------------------|----------------|----------------------|----------------|-----------------------|----------------|------------------------|------------------|-------------------------------|----------------|--------------------------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>100</u></td> <td>x 5 = <u>500</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>500</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>5.00</u></td> </tr> </table> | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>0</u> | x 2 = <u>0</u> | FAC species <u>0</u> | x 3 = <u>0</u> | FACU species <u>0</u> | x 4 = <u>0</u> | UPL species <u>100</u> | x 5 = <u>500</u> | Column Totals: <u>100</u> (A) | <u>500</u> (B) | Prevalence Index = B/A = <u>5.00</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FACW species <u>0</u> | x 2 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FAC species <u>0</u> | x 3 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FACU species <u>0</u> | x 4 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| UPL species <u>100</u> | x 5 = <u>500</u> | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>100</u> (A) | <u>500</u> (B) | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>5.00</u> | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: _____ 20% of total cover: _____ | | | | | | | | | | | | | | | | | | | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: _____ 20% of total cover: _____ | | | | | | | | | | | | | | | | | | | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | ¹ 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. | | | | | | | | | | | | | | | | |
| 1. <u>Glycine max</u> | <u>100</u> | <u>Yes</u> | <u>UPL</u> | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 9. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 10. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 11. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 12. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>50</u> 20% of total cover: <u>20</u> | | | | | | | | | | | | | | | | | | | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: _____ 20% of total cover: _____ | | | | | | | | | | | | | | | | | | | | |

Remarks: (If observed, list morphological adaptations below.)
 Site does not meet wetland vegetation criteria.

SOIL

Sampling Point: DP 12 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|---|---|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 10YR 4/3 | 100 | | | | | Loamy/Clayey | |
| 4-7 | 10YR 5/2 | 70 | 10YR 4/6 | 6 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 7-14 | 7.5YR 4/4 | 100 | | | | | Loamy/Clayey | Heavy clay |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Remarks: 4-7" layer also contains 24% 10YR 4/3. Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Biggers/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 13 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S12 T19N R2E
 Landform (hillside, terrace, etc.): berm Local relief (concave, convex, none): convex Slope (%): 1%
 Subregion (LRR or MLRA): LRR O Lat: 36.308638° Long: -90.810552° Datum: WGS 84
 Soil Map Unit Name: Bosket fine sandy loam, 0 to 3 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Site does not meet all three criteria and is not a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 13 - JC

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>5</u>) | | | | 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 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. |
| 1. <u>Sorghum halepense</u> | 90 | Yes | FACU | |
| 2. <u>Solanum carolinense</u> | 10 | No | FACU | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 13 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|----------------|---|-------------------|------------------|--------------|---------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 10YR 3/3 | 100 | | | | | Loamy/Clayey | |
| 2-14 | 10YR 5/3 | 100 | | | | | Loamy/Clayey | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (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 (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)
- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Barrier Islands 1 cm Muck (S12) (MLRA 153B, 153D)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D)
- Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Coast Prairie Redox (A16) (outside MLRA 150A)
- Reduced Vertic (F18) (outside MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (LRR P, T)
- Anomalous Bright Floodplain Soils (F20) (MLRA 153B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22) (outside MLRA 138, 152A in FL, 154)
- Barrier Islands Low Chroma Matrix (TS7) (MLRA 153B, 153D)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Site does not meet hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Biggers/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 14 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S6 T19N R3E
 Landform (hillside, terrace, etc.): agricultural field Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.313490° Long: -90.803719° Datum: WGS 84
 Soil Map Unit Name: Bosket fine sandy loam, 0 to 3 percent slopes NWI classification: n/a
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes No X
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Vegetation and hydrology significantly disturbed by farming. Hydrology is significantly altered by nearby drainage canals. Aerial imagery shows frequent saturation and soil sampling yielded hydric soils. Based on best available data, the area is a farmed wetland. | |

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 14 - JC

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | |
|---|------------------|-------------------|------------------|---|-------------------|--------------|----------------------|----------------|-----------------------|----------------|----------------------|----------------|-----------------------|----------------|------------------------|------------------|-------------------------------|----------------|--------------------------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>100</u></td> <td>x 5 = <u>500</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>500</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>5.00</u></td> </tr> </table> | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>0</u> | x 2 = <u>0</u> | FAC species <u>0</u> | x 3 = <u>0</u> | FACU species <u>0</u> | x 4 = <u>0</u> | UPL species <u>100</u> | x 5 = <u>500</u> | Column Totals: <u>100</u> (A) | <u>500</u> (B) | Prevalence Index = B/A = <u>5.00</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FACW species <u>0</u> | x 2 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FAC species <u>0</u> | x 3 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FACU species <u>0</u> | x 4 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| UPL species <u>100</u> | x 5 = <u>500</u> | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>100</u> (A) | <u>500</u> (B) | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>5.00</u> | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: _____ 20% of total cover: _____ | | | | | | | | | | | | | | | | | | | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: _____ 20% of total cover: _____ | | | | | | | | | | | | | | | | | | | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Glycine max</u> | <u>100</u> | <u>Yes</u> | <u>UPL</u> | ¹ 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 9. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 10. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 11. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 12. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>50</u> 20% of total cover: <u>20</u> | | | | | | | | | | | | | | | | | | | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: _____ 20% of total cover: _____ | | | | | | | | | | | | | | | | | | | | |

Remarks: (If observed, list morphological adaptations below.)
 Site does not meet hydrophytic vegetation criteria.

Hydrophytic Vegetation Present? Yes _____ No X

SOIL

Sampling Point: DP 14 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|---|--|---|---------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-1 | 10YR 4/3 | 100 | | | | | Sandy | |
| 1-4 | 10YR 4/3 | 60 | 10YR 5/6 | 5 | C | | Sandy | Distinct redox concentrations |
| 4-10 | 10YR 5/2 | 95 | 10YR 5/6 | 5 | C | | Sandy | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input checked="" type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Remarks: Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Biggers/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 15 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S6 T19N R3E
 Landform (hillside, terrace, etc.): berm Local relief (concave, convex, none): convex Slope (%): 1%
 Subregion (LRR or MLRA): LRR O Lat: 36.313648° Long: -90.803604° Datum: WGS 84
 Soil Map Unit Name: Bosket fine sandy loam, 0 to 3 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Site does not meet all three criteria and is not a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 15 - JC

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>5' x 40'</u>) | | | | 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 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. |
| 1. <u>Cynodon dactylon</u> | 90 | Yes | FACU | |
| 2. <u>Cyperus esculentus</u> | 5 | No | FAC | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>48</u> | | 20% of total cover: <u>19</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 15 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|---|---|---|--------------|---------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-12 | 10YR 4/3 | 100 | | | | | Loamy/Clayey | |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes _____ No <u>X</u> | | | |
| Remarks: Site does not meet hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Biggers/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 16 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S5 T19N R3E
 Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 2%
 Subregion (LRR or MLRA): LRR O Lat: 36.321393° Long: -90.781572° Datum: WGS 84
 Soil Map Unit Name: Patterson fine sandy loam, 0 to 1 percent slopes NWI classification: n/a
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Site does not meet all three criteria and is not a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | |
| Remarks: Site does not meet wetland hydrology criteria. | |

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

Sampling Point: DP 16 - JC

| <u>Tree Stratum</u> (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. <u>Liquidambar styraciflua</u> | <u>90</u> | <u>Yes</u> | <u>FAC</u> | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>57.1%</u> (A/B) |
| 2. <u>Fraxinus pennsylvanica</u> | <u>10</u> | <u>No</u> | <u>FACW</u> | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| _____ | <u>100</u> | =Total Cover | | |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. <u>Ulmus rubra</u> | <u>15</u> | <u>Yes</u> | <u>FAC</u> | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 2. <u>Sassafras albidum</u> | <u>10</u> | <u>Yes</u> | <u>FACU</u> | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| _____ | <u>25</u> | =Total Cover | | |
| 50% of total cover: <u>13</u> | | 20% of total cover: <u>5</u> | | |
| <u>Herb Stratum</u> (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. <u>Persicaria virginiana</u> | <u>15</u> | <u>Yes</u> | <u>FAC</u> | Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. <u>Liquidambar styraciflua</u> | <u>10</u> | <u>Yes</u> | <u>FAC</u> | |
| 3. <u>Asimina triloba</u> | <u>10</u> | <u>Yes</u> | <u>FACU</u> | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| _____ | <u>35</u> | =Total Cover | | |
| 50% of total cover: <u>18</u> | | 20% of total cover: <u>7</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. <u>Parthenocissus quinquefolia</u> | <u>10</u> | <u>Yes</u> | <u>FACU</u> | 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 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. |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| _____ | <u>10</u> | =Total Cover | | |
| 50% of total cover: <u>5</u> | | 20% of total cover: <u>2</u> | | |

Remarks: (If observed, list morphological adaptations below.)
 Site meets hydrophytic vegetation criteria.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: DP 16 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|--|---|--|--|--|---|--|--|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 10YR 3/3 | 100 | | | | | Loamy/Clayey | |
| 2-16 | 10YR 4/4 | 100 | | | | | Loamy/Clayey | |
| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | | ² Location: PL=Pore Lining, M=Matrix. | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | Indicators for Problematic Hydric Soils³: | | | | |
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> (MLRA 153B, 153D) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | <input type="checkbox"/> (outside MLRA 150A) | <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Reduced Vertic (F18) | <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (outside MLRA 150A, 150B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> (MLRA 153B) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Red Parent Material (F21) | <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | <input type="checkbox"/> Very Shallow Dark Surface (F22) | <input type="checkbox"/> (outside MLRA 138, 152A in FL, 154) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | <input type="checkbox"/> (MLRA 153B, 153D) | <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> (MLRA 149A, 153C, 153D) | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | <input type="checkbox"/> (LRR S, T, U) | <input type="checkbox"/> (MLRA 138, 152A in FL, 154) | | ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | Hydric Soil Present? Yes _____ No <u>X</u> | | | |
| Remarks: Site does not meet hydric soil criteria. | | | | | | | | |

| | |
|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | <i>OMB Control #: 0710-0024, Exp: 11/30/2024</i> <i>Requirement Control Symbol EXEMPT:</i> <i>(Authority: AR 335-15, paragraph 5-2a)</i> |
|--|--|

Project/Site: Highway 67 EIS City/County: Biggers/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 17 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S5 T19N R3E
 Landform (hillside, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): 1%
 Subregion (LRR or MLRA): LRR O Lat: 36.321453° Long: -90.781693° Datum: WGS 84
 Soil Map Unit Name: Patterson fine sandy loam, 0 to 1 percent slopes NWI classification: n/a
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Site meets all three criteria and is a wetland. | |

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u>X</u> No <u> </u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 17 - JC

| <u>Tree Stratum</u> (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|-------------------------------|-------------------|------------------|--|
| 1. <u><i>Acer rubrum</i></u> | <u>90</u> | Yes | FAC | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. <u><i>Fraxinus pennsylvanica</i></u> | <u>5</u> | No | FACW | |
| 3. <u><i>Liquidambar styraciflua</i></u> | <u>5</u> | No | FAC | |
| 4. <u><i>Taxodium distichum</i></u> | <u>5</u> | No | OBL | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| <u>105</u> =Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: <u>53</u> | 20% of total cover: <u>21</u> | | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>) | | | | Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. <u><i>Ilex decidua</i></u> | <u>15</u> | Yes | FACW | |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| <u>15</u> =Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: <u>8</u> | 20% of total cover: <u>3</u> | | | |
| <u>Herb Stratum</u> (Plot size: <u>5'</u>) | | | | 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 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. |
| 1. <u><i>Saururus cernuus</i></u> | <u>20</u> | Yes | OBL | |
| 2. <u><i>Persicaria sp.*</i></u> | <u>10</u> | Yes | OBL | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| <u>30</u> =Total Cover | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 50% of total cover: <u>15</u> | 20% of total cover: <u>6</u> | | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | | | | |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| _____ =Total Cover | | | | |
| 50% of total cover: _____ | 20% of total cover: _____ | | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 17 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|---|---|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-1 | 10YR 3/3 | 100 | | | | | Loamy/Clayey | |
| 1-8 | 10YR 5/1 | 70 | 10YR 5/8 | 8 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | |
| Remarks: 1-8" layer also contains 22% 10YR 5/3. Site meets hydric soil criteria. | | | | | | | | |

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 18 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S24 T20N R3E
 Landform (hillside, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.357025° Long: -90.704588° Datum: WGS 84
 Soil Map Unit Name: Amagon silt loam, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|--|---|--|---|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Hydric Soil Present? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | |
| Wetland Hydrology Present? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | |
| Remarks: Climatic conditions were considered drier than normal. Site meets all three criteria and is a wetland. | | | |

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Site meets wetland hydrology criteria.

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

Sampling Point: DP 18 - JC

| | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------------------|------------------|--|
| Tree Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u>Quercus phellos</u> | <u>75</u> | <u>Yes</u> | <u>FACW</u> | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83.3%</u> (A/B) Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 2. <u>Ulmus rubra</u> | <u>25</u> | <u>Yes</u> | <u>FAC</u> | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| _____ =Total Cover | <u>100</u> | | | |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | |
| Sapling/Shrub Stratum (Plot size: _____) | | | | |
| 1. _____ | | | | |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| _____ =Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| Herb Stratum (Plot size: <u>5'</u>) | | | | |
| 1. <u>Solidago gigantea</u> | <u>10</u> | <u>Yes</u> | <u>FACU</u> | Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. <u>Persicaria sp.*</u> | <u>5</u> | <u>Yes</u> | <u>OBL</u> | |
| 3. <u>Toxicodendron radicans</u> | <u>5</u> | <u>Yes</u> | <u>FAC</u> | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| _____ =Total Cover | <u>20</u> | | | |
| 50% of total cover: <u>10</u> | | 20% of total cover: <u>4</u> | | |
| Woody Vine Stratum (Plot size: <u>5'</u>) | | | | |
| 1. <u>Campsis radicans</u> | <u>5</u> | <u>Yes</u> | <u>FAC</u> | 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 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. |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| _____ =Total Cover | <u>5</u> | | | |
| 50% of total cover: <u>3</u> | | 20% of total cover: <u>1</u> | | |
| Remarks: (If observed, list morphological adaptations below.) * See table at end of Appendix. Site meets hydrophytic vegetation criteria. | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |

SOIL

Sampling Point: DP 18 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|----------------|---|-------------------|------------------|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-1 | 10YR 4/2 | 96 | 10YR 4/6 | 4 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 1-8 | 10YR 5/2 | 70 | 10YR 4/6 | 5 | C | PL | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | (MLRA 153B, 153D) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | (outside MLRA 150A) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | (outside MLRA 150A, 150B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) | (MLRA 153B) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | (outside MLRA 138, 152A in FL, 154) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | (MLRA 153B, 153D) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) | |
| (LRR S, T, U) | <input type="checkbox"/> Very Shallow Dark Surface (F22) | |
| | (MLRA 138, 152A in FL, 154) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

1-8" layer contains 25% 10YR 4/6. Site meets hydric soil criteria.

| | |
|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|--|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 19 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S24 T20N R3E
 Landform (hillside, terrace, etc.): floodplain Local relief (concave, convex, none): convex Slope (%): 1%
 Subregion (LRR or MLRA): LRR O Lat: 36.356960° Long: -90.704783° Datum: WGS 84
 Soil Map Unit Name: Amagon silt loam, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Site does not meet all three criteria and is not a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 19 - JC

| <u>Tree Stratum</u> (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------------------|------------------|--|
| 1. <u>Ulmus rubra</u> | 35 | Yes | FAC | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>9</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>55.6%</u> (A/B) |
| 2. <u>Quercus falcata</u> | 25 | Yes | FACU | |
| 3. <u>Salix nigra</u> | 20 | Yes | OBL | |
| 4. <u>Juniperus virginiana</u> | 20 | Yes | FACU | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 100 =Total Cover | | | | |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. <u>Ilex decidua</u> | 40 | Yes | FACW | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 40 =Total Cover | | | | |
| 50% of total cover: <u>20</u> | | 20% of total cover: <u>8</u> | | |
| <u>Herb Stratum</u> (Plot size: <u>5'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. <u>Parthenocissus quinquefolia</u> | 20 | Yes | FACU | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. <u>Toxicodendron radicans</u> | 18 | Yes | FAC | |
| 3. <u>Smilax bona-nox</u> | 5 | No | FAC | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| 43 =Total Cover | | | | |
| 50% of total cover: <u>22</u> | | 20% of total cover: <u>9</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. <u>Parthenocissus quinquefolia</u> | 5 | Yes | FACU | 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 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. |
| 2. <u>Toxicodendron radicans</u> | 5 | Yes | FAC | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 10 =Total Cover | | | | |
| 50% of total cover: <u>5</u> | | 20% of total cover: <u>2</u> | | |
| Hydrophytic Vegetation Present? Yes <u>X</u> No _____ | | | | |

Remarks: (If observed, list morphological adaptations below.)
 Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 19 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|----------------|---|-------------------|------------------|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-7 | 10YR 4/3 | 100 | | | | | Loamy/Clayey | |
| 7-9 | 10YR 5/2 | 96 | 10YR 5/6 | 4 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

| | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | (MLRA 153B, 153D) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | (outside MLRA 150A) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Depleted Matrix (F3) | (outside MLRA 150A, 150B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) | (MLRA 153B) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | (outside MLRA 138, 152A in FL, 154) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | (MLRA 153B, 153D) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) | |
| (LRR S, T, U) | <input type="checkbox"/> Very Shallow Dark Surface (F22) | |
| | (MLRA 138, 152A in FL, 154) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Hardpan
 Depth (inches): 9

Hydric Soil Present? Yes No

Remarks:

Site does not meet hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 20 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S24 T20N R3E
 Landform (hillside, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.356810° Long: -90.703788° Datum: WGS 84
 Soil Map Unit Name: Amagon silt loam, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Site meets all three criteria and is a wetland. | |

HYDROLOGY

| | |
|---|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 20 - JC

| | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|-------------------------------|-------------------|------------------|--|
| Tree Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u><i>Carya cordiformis</i></u> | 60 | Yes | FACU | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80.0%</u> (A/B) |
| 2. <u><i>Ulmus rubra</i></u> | 30 | Yes | FAC | |
| 3. <u><i>Fraxinus pennsylvanica</i></u> | 10 | No | FACW | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| | 100 | =Total Cover | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: <u>50</u> | 20% of total cover: <u>20</u> | | | |
| Sapling/Shrub Stratum (Plot size: <u>15'</u>) | | | | |
| 1. <u><i>Fraxinus pennsylvanica</i></u> | 15 | Yes | FACW | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| | 15 | =Total Cover | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: <u>8</u> | 20% of total cover: <u>3</u> | | | |
| Herb Stratum (Plot size: <u>5'</u>) | | | | |
| 1. <u><i>Elymus virginicus</i></u> | 5 | Yes | 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. |
| 2. <u><i>Bignonia capreolata</i></u> | 5 | Yes | FAC | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| | 10 | =Total Cover | | |
| 50% of total cover: <u>5</u> | 20% of total cover: <u>2</u> | | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| | | =Total Cover | | |
| 50% of total cover: _____ | 20% of total cover: _____ | | | |

Remarks: (If observed, list morphological adaptations below.)
 Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 20 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|---|--|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-1 | 10YR 5/3 | 100 | | | | | Loamy/Clayey | |
| 1-3 | 10YR 5/2 | 94 | 10YR 5/6 | 6 | C | PL/M | Loamy/Clayey | Prominent redox concentrations |
| 3-8 | 10YR 6/1 | 94 | 10YR 5/6 | 6 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Remarks: Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 21 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S24 T20N R3E
 Landform (hillside, terrace, etc.): forested flat Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.356767° Long: -90.703620° Datum: WGS 84
 Soil Map Unit Name: Amagon silt loam, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Site does not meet all three criteria and is not a wetland. | |

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 21 - JC

| | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|---------------------|----------------------|---------------------|---|
| Tree Stratum (Plot size: <u>20' x 4'</u>) | | | | |
| 1. <u><i>Ulmus alata</i></u> | <u>70</u> | Yes | FACU | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B) Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 2. <u><i>Fraxinus pennsylvanica</i></u> | <u>15</u> | No | FACW | |
| 3. <u><i>Celtis laevigata</i></u> | <u>15</u> | No | FACW | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| | <u>100</u> | | | |
| =Total Cover | | | | |
| 50% of total cover: <u>50</u> 20% of total cover: <u>20</u> | | | | |
| Sapling/Shrub Stratum (Plot size: <u>20' x 4'</u>) | | | | |
| 1. <u><i>Ilex decidua</i></u> | <u>25</u> | Yes | FACW | Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. <u><i>Ulmus alata</i></u> | <u>10</u> | Yes | FACU | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| | <u>35</u> | | | |
| =Total Cover | | | | |
| 50% of total cover: <u>18</u> 20% of total cover: <u>7</u> | | | | |
| Herb Stratum (Plot size: <u>5'</u>) | | | | |
| 1. <u><i>Parthenocissus quinquefolia</i></u> | <u>5</u> | Yes | FACU | ¹ 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 2. <u><i>Smilax bona-nox</i></u> | <u>5</u> | Yes | FAC | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| | <u>10</u> | | | |
| =Total Cover | | | | |
| 50% of total cover: <u>5</u> 20% of total cover: <u>2</u> | | | | |
| Woody Vine Stratum (Plot size: <u>20' x 4'</u>) | | | | |
| 1. <u><i>Campsis radicans</i></u> | <u>40</u> | Yes | FAC | |
| 2. <u><i>Smilax bona-nox</i></u> | <u>5</u> | No | FAC | |
| 3. <u><i>Parthenocissus quinquefolia</i></u> | <u>5</u> | No | FACU | |
| 4. <u><i>Toxicodendron radicans</i></u> | <u>5</u> | No | FAC | |
| 5. _____ | | | | |
| | <u>55</u> | | | |
| =Total Cover | | | | |
| 50% of total cover: <u>28</u> 20% of total cover: <u>11</u> | | | | |

Remarks: (If observed, list morphological adaptations below.)
 Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 21 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|---|---|---|--------------|-------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-3 | 10YR 3/3 | 100 | | | | | Loamy/Clayey | |
| 3-5 | 10YR 4/3 | 100 | | | | | Loamy/Clayey | |
| 5-10 | 10YR 5/3 | 96 | 10YR 4/6 | 4 | C | M | Loamy/Clayey | Distinct redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes _____ No <u>X</u> | | | |
| Remarks: Site does not meet hydric soil criteria. | | | | | | | | |

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 22 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S17 T20N R4E
 Landform (hillside, terrace, etc.): agricultural field Local relief (concave, convex, none): concave Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.372844° Long: -90.676881° Datum: WGS 84
 Soil Map Unit Name: Crowley silt loam NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Vegetation and hydrology significantly disturbed by farming. Hydrology significantly altered by nearby drainage canals. Aerial imagery shows frequent saturation and soil sampling yielded hydric soils. Based on best available data, the area is a farmed wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 22 - JC

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------|------------------|---|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>80</u> x 5 = <u>400</u> Column Totals: <u>80</u> (A) <u>400</u> (B) Prevalence Index = B/A = <u>5.00</u> |
| 50% of total cover: _____ 20% of total cover: _____ | | | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ 20% of total cover: _____ | | | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | |
| 1. <u>Glycine max</u> | <u>80</u> | <u>Yes</u> | <u>UPL</u> | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>40</u> 20% of total cover: <u>16</u> | | | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ 20% of total cover: _____ | | | | |

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
 Total Number of Dominant Species Across All Strata: 1 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species 0 x 1 = 0
 FACW species 0 x 2 = 0
 FAC species 0 x 3 = 0
 FACU species 0 x 4 = 0
 UPL species 80 x 5 = 400
 Column Totals: 80 (A) 400 (B)
 Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:
1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is >50%
3 - Prevalence Index is ≤3.0¹
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:
Tree – Woody plants, excluding vines, 3 in. (7.6 cm) 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 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 _____ No X

Remarks: (If observed, list morphological adaptations below.)
 Site disturbed by soybean farming.

SOIL

Sampling Point: DP 22 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|--|---|--|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 10YR 4/2 | 96 | 10YR 4/6 | 4 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 2-8 | 10YR 5/2 | 94 | 10YR 5/6 | 6 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input checked="" type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Remarks: Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 23 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S18 T20N R4E
 Landform (hillside, terrace, etc.): roadside berm Local relief (concave, convex, none): convex Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.372849° Long: -90.677220° Datum: WGS 84
 Soil Map Unit Name: Crowley silt loam NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|---|--|

Remarks:
 Climatic conditions were considered drier than normal. Site does not meet all three criteria and is not a wetland.

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) | Secondary Indicators (minimum of two required) |
| <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 23 - JC

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>5'</u>) | | | | 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 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. |
| 1. <u>Cynodon dactylon</u> | 60 | Yes | FACU | |
| 2. <u>Echinochloa crus-galli</u> | 20 | Yes | FACW | |
| 3. <u>Rumex crispus</u> | 10 | No | FAC | |
| 4. <u>Sorghum halepense</u> | 10 | No | FACU | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 23 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|----------------|---|-------------------|------------------|--------------|------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-12 | 10YR 4/3 | 100 | | | | | Loamy/Clayey | Gravel mix |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (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 (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)
- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Barrier Islands 1 cm Muck (S12) (MLRA 153B, 153D)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D)
- Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Coast Prairie Redox (A16) (outside MLRA 150A)
- Reduced Vertic (F18) (outside MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (LRR P, T)
- Anomalous Bright Floodplain Soils (F20) (MLRA 153B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22) (outside MLRA 138, 152A in FL, 154)
- Barrier Islands Low Chroma Matrix (TS7) (MLRA 153B, 153D)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Site does not meet hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 24 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S3 T20N R4E
 Landform (hillside, terrace, etc.): agricultural field Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.411024° Long: -90.636042° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Vegetation and hydrology significantly disturbed by farming. Hydrology significantly altered by nearby drainage canals. Aerial imagery shows frequent saturation and soil sampling yielded hydric soils. Based on best available data, the area is a farmed wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Hydrology disturbed by farming.

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

Sampling Point: DP 24 - JC

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | 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 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. |
| 1. <u>Glycine max</u> | <u>100</u> | <u>Yes</u> | <u>UPL</u> | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 Site farmed for soybeans. Vegetation significantly altered.

SOIL

Sampling Point: DP 24 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|----------------|---|-------------------|------------------|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-1 | 10YR 4/2 | 98 | 10YR 4/6 | 2 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 1-10 | 10YR 6/2 | 89 | 10YR 5/6 | 6 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

| | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | (MLRA 153B, 153D) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | (outside MLRA 150A) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | (outside MLRA 150A, 150B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) | (MLRA 153B) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | (outside MLRA 138, 152A in FL, 154) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | (MLRA 153B, 153D) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) | |
| (LRR S, T, U) | <input type="checkbox"/> Very Shallow Dark Surface (F22) | |
| | (MLRA 138, 152A in FL, 154) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

1-10" layer contains 5% Gley1 5/5GY. Site meets hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 25 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S3 T20N R4E
 Landform (hillside, terrace, etc.): shoulder slope Local relief (concave, convex, none): convex Slope (%): 1%
 Subregion (LRR or MLRA): LRR O Lat: 36.411032° Long: -90.635656° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Site does not meet all three criteria and is not a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 25 - JC

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>5'</u>) | | | | 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 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. |
| 1. <u>Cynodon dactylon</u> | <u>95</u> | <u>Yes</u> | <u>FACU</u> | |
| 2. <u>Rumex crispus</u> | <u>5</u> | <u>No</u> | <u>FAC</u> | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 25 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|--|---|--|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 10YR 5/2 | 96 | 10YR 4/6 | 4 | C | PL | Loamy/Clayey | Prominent redox concentrations |
| 4-10 | 10YR 4/3 | 94 | 10YR 4/6 | 6 | C | PL | Loamy/Clayey | Distinct redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | Indicators for Problematic Hydric Soils³: | | | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | |
| Remarks: Site meets hydric criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 26 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S19 T21N R5E
 Landform (hillside, terrace, etc.): agricultural field Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.447575° Long: -90.581691° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Vegetation and hydrology significantly disturbed by farming. Hydrology significantly altered by nearby drainage canals. Aerial imagery shows frequent saturation and soil sampling yielded hydric soils. Based on best available data, the area is a farmed wetland. | |

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Hydrology disturbed by farming.

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

Sampling Point: DP 26 - JC

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | 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 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. |
| 1. <u>Glycine max</u> | <u>80</u> | <u>Yes</u> | <u>UPL</u> | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 50% of total cover: <u>40</u> | | 20% of total cover: <u>16</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 Vegetation significantly disturbed by agriculture.

SOIL

Sampling Point: DP 26 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|--|---|-------------------|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-1 | 10YR 4/3 | 95 | 10YR 4/6 | 5 | C | M | Loamy/Clayey | Distinct redox concentrations |
| 1-10 | 10YR 5/1 | 95 | 10YR 5/6 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | | ² Location: PL=Pore Lining, M=Matrix. | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | | Indicators for Problematic Hydric Soils³: | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | | Hydric Soil Present? Yes _____ No <u>X</u> _____ | | |
| Remarks: Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 27 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S19 T21N R5E
 Landform (hillside, terrace, etc.): roadside berm Local relief (concave, convex, none): convex Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.447500° Long: -90.581233° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Site does not meet all three criteria and is not in a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 27 - JC

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>5'</u>) | | | | 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 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. |
| 1. <u>Chasmanthium latifolium</u> | 60 | Yes | FAC | |
| 2. <u>Rumex crispus</u> | 10 | No | FAC | |
| 3. <u>Toxicodendron radicans</u> | 10 | No | FAC | |
| 4. <u>Rubus argutus</u> | 10 | No | FAC | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| 90 = Total Cover | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 50% of total cover: <u>45</u> | | 20% of total cover: <u>18</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 27 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|---|---|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-6 | 10YR 4/3 | 100 | | | | | Loamy/Clayey | |
| 6-12 | 10YR 5/2 | 94 | 10YR 5/6 | 6 | C | PL | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes _____ No <u>X</u> | | | |
| Remarks: Site does not meet hydric soil criteria. | | | | | | | | |

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 28 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S8 T21N R5E
 Landform (hillside, terrace, etc.): forested depression Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.470027° Long: -90.553398° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Site meets all three criteria and is in a wetland. Climatic conditions were considered drier than normal. | |

HYDROLOGY

| | |
|---|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 28 - JC

| <u>Tree Stratum</u> (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|-------------------------------|-------------------|------------------|--|
| 1. <u><i>Acer rubrum</i></u> | <u>80</u> | Yes | FAC | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. <u><i>Celtis laevigata</i></u> | <u>20</u> | Yes | FACW | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| <u>100</u> =Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: <u>50</u> | 20% of total cover: <u>20</u> | | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>) | | | | |
| 1. <u><i>Ulmus rubra</i></u> | <u>15</u> | Yes | FAC | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. <u><i>Quercus pagoda</i></u> | <u>10</u> | Yes | FAC | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| <u>25</u> =Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: <u>13</u> | 20% of total cover: <u>5</u> | | | |
| <u>Herb Stratum</u> (Plot size: <u>5'</u>) | | | | |
| 1. <u><i>Smilax rotundifolia</i></u> | <u>5</u> | Yes | 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. |
| 2. <u><i>Campsis radicans</i></u> | <u>5</u> | Yes | FAC | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| <u>10</u> =Total Cover | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 50% of total cover: <u>5</u> | 20% of total cover: <u>2</u> | | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | | | | |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| _____ =Total Cover | | | | |
| 50% of total cover: _____ | 20% of total cover: _____ | | | |

Remarks: (If observed, list morphological adaptations below.)
 Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 28 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|--|---------------|-----|----------------|---|-------------------|------------------|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-1 | 10YR 3/2 | 100 | | | | | | |
| 1-10 | 10YR 5/2 | 92 | 10YR 4/6 | 8 | C | PL | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

| | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | (MLRA 153B, 153D) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | (outside MLRA 150A) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | (outside MLRA 150A, 150B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) | (MLRA 153B) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | (outside MLRA 138, 152A in FL, 154) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | (MLRA 153B, 153D) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) | |
| (LRR S, T, U) | <input type="checkbox"/> Very Shallow Dark Surface (F22) | |
| | (MLRA 138, 152A in FL, 154) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Site meets hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 29 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S8 T21N R5E
 Landform (hillside, terrace, etc.): forested depression Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.470588° Long: -90.552625° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: Site does not meet all three criteria and is not a wetland. Climatic conditions were considered drier than normal. | |

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 29 - JC

| | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|---------------------|-------------------------------|---------------------|--|
| Tree Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u><i>Ulmus alata</i></u> | <u>35</u> | Yes | FACU | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40.0%</u> (A/B) Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 2. <u><i>Fraxinus americana</i></u> | <u>35</u> | Yes | FACU | |
| 3. <u><i>Celtis laevigata</i></u> | <u>15</u> | No | FACW | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| | <u>85</u> | | | |
| 50% of total cover: <u>43</u> | | 20% of total cover: <u>17</u> | | |
| Sapling/Shrub Stratum (Plot size: <u>15'</u>) | | | | |
| 1. <u><i>Celtis laevigata</i></u> | <u>10</u> | Yes | FACW | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| | <u>10</u> | | | |
| 50% of total cover: <u>5</u> | | 20% of total cover: <u>2</u> | | |
| Herb Stratum (Plot size: <u>5'</u>) | | | | |
| 1. <u><i>Panicum virgatum</i></u> | <u>15</u> | Yes | FAC | ¹ 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 2. <u><i>Ambrosia artemisiifolia</i></u> | <u>10</u> | Yes | FACU | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| | <u>25</u> | | | |
| 50% of total cover: <u>13</u> | | 20% of total cover: <u>5</u> | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| | | _____ =Total Cover | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 Site does not meet hydrophytic vegetation criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 30 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S9 T21N R5E
 Landform (hillside, terrace, etc.): forested depression Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.478308° Long: -90.536275° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Site meets all three criteria and is in a wetland. Climatic conditions were considered drier than normal. | |

HYDROLOGY

| | |
|---|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 30 - JC

| <u>Tree Stratum</u> (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
|---|------------------|-------------------------------|------------------|---|
| 1. <u>Acer rubrum</u> | <u>80</u> | Yes | FAC | |
| 2. <u>Liquidambar styraciflua</u> | <u>20</u> | No | FAC | |
| 3. <u>Fraxinus pennsylvanica</u> | <u>10</u> | No | FACW | |
| 4. <u>Celtis laevigata</u> | <u>5</u> | No | FACW | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| _____ =Total Cover | <u>115</u> | | | |
| 50% of total cover: <u>58</u> | | 20% of total cover: <u>23</u> | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>) | | | | |
| 1. <u>Ilex decidua</u> | <u>5</u> | Yes | FACW | |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| _____ =Total Cover | <u>5</u> | | | |
| 50% of total cover: <u>3</u> | | 20% of total cover: <u>1</u> | | |
| <u>Herb Stratum</u> (Plot size: <u>5'</u>) | | | | |
| 1. <u>Smilax rotundifolia</u> | <u>10</u> | Yes | FAC | |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| _____ =Total Cover | <u>10</u> | | | |
| 50% of total cover: <u>5</u> | | 20% of total cover: <u>2</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: <u>30'</u>) | | | | |
| 1. <u>Vitis sp.*</u> | <u>5</u> | Yes | FAC | |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| _____ =Total Cover | <u>5</u> | | | |
| 50% of total cover: <u>3</u> | | 20% of total cover: <u>1</u> | | |

Hydrophytic Vegetation Indicators:
1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
3 - Prevalence Index is ≤3.0¹
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) 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 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 No

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 30 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|----------------|---|-------------------|------------------|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-3 | 10YR 5/3 | 100 | | | | | Loamy/Clayey | |
| 3-8 | 10YR 6/1 | 94 | 10YR 4/6 | 6 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (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 (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)**
- Polyvalue Below Surface (S8) **(LRR S, T, U)**
- Thin Dark Surface (S9) **(LRR S, T, U)**
- Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- Loamy Mucky Mineral (F1) **(LRR O)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) **(LRR U)**
- Depleted Ochric (F11) **(MLRA 151)**
- Iron-Manganese Masses (F12) **(LRR O, P, T)**
- Umbric Surface (F13) **(LRR P, T, U)**
- Delta Ochric (F17) **(MLRA 151)**
- Reduced Vertic (F18) **(MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) **(LRR O)**
- 2 cm Muck (A10) **(LRR S)**
- Coast Prairie Redox (A16) **(outside MLRA 150A)**
- Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(LRR P, T)**
- Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Site meets hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 31 - JC
 Investigator(s): Colby Marshall; Joe Rujawitz Section, Township, Range: S9 T21N R5E
 Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 2%
 Subregion (LRR or MLRA): LRR O Lat: 36.478012° Long: -90.536950° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: Site does not meet all three criteria and is not a wetland. Climatic conditions were considered drier than normal. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 31 - JC

| | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|---------------------|-------------------------------|---------------------|---|
| Tree Stratum (Plot size: <u>6' x 30'</u>) | | | | |
| 1. <u><i>Ulmus rubra</i></u> | 100 | Yes | FAC | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B) |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 100 =Total Cover | | | | |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | |
| Sapling/Shrub Stratum (Plot size: <u>6' x 30'</u>) | | | | |
| 1. <u><i>Carya cordiformis</i></u> | 30 | Yes | FACU | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 2. <u><i>Celtis laevigata</i></u> | 10 | Yes | FACW | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 40 =Total Cover | | | | |
| 50% of total cover: <u>20</u> | | 20% of total cover: <u>8</u> | | |
| Herb Stratum (Plot size: <u>6' x 30'</u>) | | | | |
| 1. <u><i>Toxicodendron radicans</i></u> | 10 | Yes | FAC | Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. <u><i>Parthenocissus quinquefolia</i></u> | 5 | Yes | FACU | |
| 3. <u><i>Smilax sp.*</i></u> | 5 | Yes | FAC | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| 20 =Total Cover | | | | |
| 50% of total cover: <u>10</u> | | 20% of total cover: <u>4</u> | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | | | | |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| _____ =Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) 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 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 No _____

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 31 - JC

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|--|---|-------------------|--|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-3 | 10YR 4/1 | 95 | 10YR 4/6 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 3-8 | 10YR 5/2 | 96 | 10YR 4/6 | 4 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | | ² Location: PL=Pore Lining, M=Matrix. | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | | Indicators for Problematic Hydric Soils³: | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | |
| Remarks: Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/18/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 1 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S24 T18N R1E
 Landform (hillside, terrace, etc.): wooded riparian zone Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.183700° Long: -90.917983° Datum: WGS 84
 Soil Map Unit Name: Patterson fine sandy loam, 0 to 1 percent slopes NWI classification: n/a
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Irrigated fields to west and east. Site does not meet all three criteria and is not in a wetland. | |

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) | Secondary Indicators (minimum of two required) |
| <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 1 - RCM

| | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------|------------------|--|
| Tree Stratum (Plot size: <u>25' linear</u>) | | | | |
| 1. <u><i>Celtis laevigata</i></u> | <u>20</u> | Yes | FACW | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B) Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 2. <u><i>Juglans nigra</i></u> | <u>20</u> | Yes | UPL | |
| 3. <u><i>Carya illinoensis</i></u> | <u>20</u> | Yes | FACU | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| <u>60</u> =Total Cover 50% of total cover: <u>30</u> 20% of total cover: <u>12</u> | | | | |
| Sapling/Shrub Stratum (Plot size: <u>25' linear</u>) | | | | |
| 1. <u><i>Sassafras albidum</i></u> | <u>10</u> | Yes | FACU | Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| <u>10</u> =Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u> | | | | |
| Herb Stratum (Plot size: <u>25' linear</u>) | | | | |
| 1. <u><i>Ambrosia trifida</i></u> | <u>10</u> | Yes | 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. |
| 2. <u><i>Celtis laevigata</i></u> | <u>10</u> | Yes | FACW | |
| 3. <u><i>Sassafras albidum</i></u> | <u>5</u> | Yes | FACU | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| <u>25</u> =Total Cover 50% of total cover: <u>13</u> 20% of total cover: <u>5</u> | | | | |
| Woody Vine Stratum (Plot size: <u>25' linear</u>) | | | | |
| 1. <u><i>Toxicodendron radicans</i></u> | <u>10</u> | Yes | FAC | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 2. <u><i>Smilax sp.*</i></u> | <u>2</u> | No | FAC | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| <u>12</u> =Total Cover 50% of total cover: <u>6</u> 20% of total cover: <u>3</u> | | | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 1 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|----------------|---|-------------------|------------------|--------------|---------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-10 | 10YR 3/3 | 100 | | | | | Loamy/Clayey | |
| 10-12 | 10YR 3/3 | 90 | | | | | Loamy/Clayey | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (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 (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)**
- Polyvalue Below Surface (S8) **(LRR S, T, U)**
- Thin Dark Surface (S9) **(LRR S, T, U)**
- Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- Loamy Mucky Mineral (F1) **(LRR O)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) **(LRR U)**
- Depleted Ochric (F11) **(MLRA 151)**
- Iron-Manganese Masses (F12) **(LRR O, P, T)**
- Umbric Surface (F13) **(LRR P, T, U)**
- Delta Ochric (F17) **(MLRA 151)**
- Reduced Vertic (F18) **(MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) **(LRR O)**
- 2 cm Muck (A10) **(LRR S)**
- Coast Prairie Redox (A16) **(outside MLRA 150A)**
- Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(LRR P, T)**
- Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

10-12" layer has 10% 10YR 4/3. Site does not meet hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/18/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 2 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S24 T18N R1E
 Landform (hillside, terrace, etc.): ditch Local relief (concave, convex, none): concave Slope (%): <1%
 Subregion (LRR or MLRA): LRR O Lat: 36.185834° Long: -90.918169° Datum: WGS 84
 Soil Map Unit Name: McCrorry fine sandy loam, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes No X
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Field drain - completely vegetated. Site disturbed by agriculture. Site meets all three criteria and is a wetland. | |

HYDROLOGY

| | |
|---|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>3</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u>X</u> No <u> </u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Rained previous day. Algal mats visible underwater. Edge of active rice field. Inundation caused by active pumping. Site meets wetland hydrology criteria.

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

Sampling Point: DP 2 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>20' linear</u>) | | | | 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 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. |
| 1. <u>Echinochloa crus-galli</u> | 80 | Yes | FACW | |
| 2. <u>Cyperus sp.*</u> | 10 | No | FACW | |
| 3. <u>Lepidium sp.*</u> | 5 | No | FACU | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>48</u> | | 20% of total cover: <u>19</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 2 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|----------------|---|-------------------|------------------|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-3 | 10YR 3/2 | 90 | | | | | Loamy/Clayey | |
| 3-10 | 10YR 4/2 | 95 | 10YR 5/6 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (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 (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)**
- Polyvalue Below Surface (S8)
(LRR S, T, U)

- Thin Dark Surface (S9) **(LRR S, T, U)**
- Barrier Islands 1 cm Muck (S12)
(MLRA 153B, 153D)
- Loamy Mucky Mineral (F1) **(LRR O)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) **(LRR U)**
- Depleted Ochric (F11) **(MLRA 151)**
- Iron-Manganese Masses (F12) **(LRR O, P, T)**
- Umbric Surface (F13) **(LRR P, T, U)**
- Delta Ochric (F17) **(MLRA 151)**
- Reduced Vertic (F18) **(MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- Anomalous Bright Floodplain Soils (F20)
(MLRA 149A, 153C, 153D)
- Very Shallow Dark Surface (F22)
(MLRA 138, 152A in FL, 154)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) **(LRR O)**
- 2 cm Muck (A10) **(LRR S)**
- Coast Prairie Redox (A16)
(outside MLRA 150A)
- Reduced Vertic (F18)
(outside MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) **(LRR P, T)**
- Anomalous Bright Floodplain Soils (F20)
(MLRA 153B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
(outside MLRA 138, 152A in FL, 154)
- Barrier Islands Low Chroma Matrix (TS7)
(MLRA 153B, 153D)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

0-3" layer contains 10% 10YR 4/4. Site meets hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/18/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 3 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S24 T18N R1E
 Landform (hillside, terrace, etc.): field edge berm Local relief (concave, convex, none): convex Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.185834° Long: -90.918134° Datum: WGS 84
 Soil Map Unit Name: McCrorry fine sandy loam, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Site does not meet all three criteria and is not in a wetland. | |

HYDROLOGY

| | |
|---|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 3 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | 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 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. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>20' linear</u>) | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 1. <u>Echinochloa crus-galli</u> | 40 | Yes | FACW | |
| 2. <u>Cynodon dactylon</u> | 25 | Yes | FACU | |
| 3. <u>Erigeron canadensis</u> | 10 | No | FACU | |
| 4. <u>Allium sp.*</u> | 5 | No | FACU | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>40</u> | | 20% of total cover: <u>16</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 3 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|----------------|---|-------------------|------------------|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-6 | 10YR 3/2 | 90 | 10YR 5/6 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (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 (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)**
- Polyvalue Below Surface (S8) **(LRR S, T, U)**
- Thin Dark Surface (S9) **(LRR S, T, U)**
- Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- Loamy Mucky Mineral (F1) **(LRR O)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) **(LRR U)**
- Depleted Ochric (F11) **(MLRA 151)**
- Iron-Manganese Masses (F12) **(LRR O, P, T)**
- Umbric Surface (F13) **(LRR P, T, U)**
- Delta Ochric (F17) **(MLRA 151)**
- Reduced Vertic (F18) **(MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) **(LRR O)**
- 2 cm Muck (A10) **(LRR S)**
- Coast Prairie Redox (A16) **(outside MLRA 150A)**
- Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(LRR P, T)**
- Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

0-6" layer also contains a 5% 10YR 3/4 mix. Site meets hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/18/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 4 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S13 T18N R1E
 Landform (hillside, terrace, etc.): agricultural field Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.194373° Long: -90.918419° Datum: WGS 84
 Soil Map Unit Name: Patterson fine sandy loam, 0 to 1 percent slopes NWI classification: n/a
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes No X
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Vegetation, soil, and hydrology disturbed by farming. Site does not meet any criteria and is not a wetland. | |

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | |
| Remarks: Hydrology disturbed by farming. | |

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

Sampling Point: DP 4 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>5'</u>) | | | | 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 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. |
| 1. <u>Glycine max</u> | <u>100</u> | <u>Yes</u> | <u>UPL</u> | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 Vegetation disturbed by soybean farming.

SOIL

Sampling Point: DP 4 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|----|---|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 10YR 3/3 | 100 | | | | | Loamy/Clayey | |
| 4-10 | 10YR 3/3 | 60 | 10YR 5/6 | 5 | C | M | Loamy/Clayey | Distinct redox concentrations |
| 10-16 | 10YR 6/1 | 80 | 10YR 5/6 | 20 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes _____ No <u>X</u> | | | |
| Remarks: 4-10" layer contains 35% 10YR 3/2. Soil disturbed by farming. Site does not meet hydric soil criteria. | | | | | | | | |

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/18/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 5 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S13 T18N R1E
 Landform (hillside, terrace, etc.): fallow field Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.205101° Long: -90.918082° Datum: WGS 84
 Soil Map Unit Name: Crowley silt loam NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Site does not meet all three criteria and is not a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 5 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>5'</u>) | | | | 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 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. |
| 1. <u>Lepidium sp.*</u> | 30 | Yes | FACU | |
| 2. <u>Erigeron canadensis</u> | 20 | Yes | FACU | |
| 3. <u>Poa pratensis</u> | 15 | No | FACU | |
| 4. <u>Rumex crispus</u> | 10 | No | FAC | |
| 5. <u>Rudbeckia hirta</u> | 10 | No | FACU | |
| 6. <u>Bromus arvensis</u> | 5 | No | FACU | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>45</u> | | 20% of total cover: <u>18</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 5 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|----------------|---|-------------------|------------------|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-6 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | |
| 6-12 | 10YR 5/1 | 98 | 10YR 5/6 | 2 | C | PL | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (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 (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)**
- Polyvalue Below Surface (S8) **(LRR S, T, U)**
- Thin Dark Surface (S9) **(LRR S, T, U)**
- Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- Loamy Mucky Mineral (F1) **(LRR O)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) **(LRR U)**
- Depleted Ochric (F11) **(MLRA 151)**
- Iron-Manganese Masses (F12) **(LRR O, P, T)**
- Umbric Surface (F13) **(LRR P, T, U)**
- Delta Ochric (F17) **(MLRA 151)**
- Reduced Vertic (F18) **(MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) **(LRR O)**
- 2 cm Muck (A10) **(LRR S)**
- Coast Prairie Redox (A16) **(outside MLRA 150A)**
- Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(LRR P, T)**
- Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Site meets hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/18/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 6 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S13 T18N R1E
 Landform (hillside, terrace, etc.): woodline Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.205195° Long: -90.918147° Datum: WGS 84
 Soil Map Unit Name: Crowley silt loam NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Site meets all three wetland criteria and is in a wetland. | |

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Aquatic Fauna (B13) ___ High Water Table (A2) ___ Marl Deposits (B15) (LRR U) ___ Saturation (A3) ___ Hydrogen Sulfide Odor (C1) ___ Water Marks (B1) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Sediment Deposits (B2) ___ Presence of Reduced Iron (C4) ___ Drift Deposits (B3) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Algal Mat or Crust (B4) ___ Thin Muck Surface (C7) ___ Iron Deposits (B5) ___ Other (Explain in Remarks) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) <u>X</u> Geomorphic Position (D2) ___ Shallow Aquitard (D3) <u>X</u> FAC-Neutral Test (D5) ___ Sphagnum Moss (D8) (LRR T, U) |
|--|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u>X</u> No <u> </u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 6 - RCM

| <u>Tree Stratum</u> (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------|------------------|--|
| 1. <u>Celtis laevigata</u> | 50 | Yes | FACW | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80.0%</u> (A/B) |
| 2. <u>Populus deltoides</u> | 10 | No | FAC | |
| 3. <u>Morus rubra</u> | 5 | No | FACU | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| _____ =Total Cover 50% of total cover: <u>33</u> 20% of total cover: <u>13</u> | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>30"</u>) | | | | |
| 1. <u>Morus rubra</u> | 15 | Yes | FACU | |
| 2. <u>Celtis laevigata</u> | 15 | Yes | FACW | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| _____ =Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u> | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | |
| 1. <u>Ambrosia trifida</u> | 40 | Yes | FAC | |
| 2. <u>Triticum aestivum</u> | 10 | No | UPL | |
| 3. <u>Lepidium sp.*</u> | 5 | No | FACU | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| _____ =Total Cover 50% of total cover: <u>28</u> 20% of total cover: <u>11</u> | | | | 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 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. |
| <u>Woody Vine Stratum</u> (Plot size: <u>30'</u>) | | | | |
| 1. <u>Campsis radicans</u> | 40 | Yes | FAC | |
| 2. <u>Convolvulus arvensis</u> | 5 | No | UPL | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| _____ =Total Cover 50% of total cover: <u>23</u> 20% of total cover: <u>9</u> | | | | |
| Remarks: (If observed, list morphological adaptations below.) *See table at end of Appendix. Site meets hydrophytic vegetation criteria. | | | | |

SOIL

Sampling Point: DP 6 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|----------------|---|-------------------|------------------|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | |
| 2-8 | 10YR 4/2 | 100 | | | | | Loamy/Clayey | |
| 8-16 | 10YR 5/1 | 95 | 10YR 5/6 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

| | |
|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) |
| <input type="checkbox"/> Black Histic (A3) | (MLRA 153B, 153D) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) |
| (LRR S, T, U) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| | (MLRA 138, 152A in FL, 154) |

Indicators for Problematic Hydric Soils³:

| |
|--|
| <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Coast Prairie Redox (A16) |
| (outside MLRA 150A) |
| <input type="checkbox"/> Reduced Vertic (F18) |
| (outside MLRA 150A, 150B) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) |
| <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| (MLRA 153B) |
| <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| (outside MLRA 138, 152A in FL, 154) |
| <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) |
| (MLRA 153B, 153D) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Site meets hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/18/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 7 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S13 T18N R1E
 Landform (hillside, terrace, etc.): fallow field Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.206988° Long: -90.917582° Datum: WGS 84
 Soil Map Unit Name: Crowley silt loam NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Site meets all three criteria and is in a wetland. | |

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u>X</u> No <u> </u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 7 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | 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 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. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 1. <u>Cyperus sp.*</u> | <u>70</u> | <u>Yes</u> | <u>FACW</u> | |
| 2. <u>Leersia oryzoides</u> | <u>25</u> | <u>Yes</u> | <u>OBL</u> | |
| 3. <u>Rudbeckia hirta</u> | <u>10</u> | <u>No</u> | <u>FACU</u> | |
| 4. <u>Anethum graveolens</u> | <u>10</u> | <u>No</u> | <u>UPL</u> | |
| 5. <u>Rumex crispus</u> | <u>5</u> | <u>No</u> | <u>FAC</u> | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>60</u> | | 20% of total cover: <u>24</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: <u>30'</u>) | | | | |
| 1. <u>Convolvulus arvensis</u> | <u>5</u> | <u>Yes</u> | <u>UPL</u> | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>3</u> | | 20% of total cover: <u>1</u> | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 7 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|---|---|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-1 | | | | | | | | Humus |
| 1-4 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | |
| 4-10 | 10YR 4/2 | 95 | 10YR 5/8 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: | Hardpan | | | | | | | |
| Depth (inches): | 10 | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Remarks: Site meets hydric soil criteria. | | | | | | | | |

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/18/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 8 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S13 T18N R1E
 Landform (hillside, terrace, etc.): berm Local relief (concave, convex, none): convex Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.206988° Long: -90.917730° Datum: WGS 84
 Soil Map Unit Name: Crowley silt loam NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Hard compacted berm. Site does not meet all three criteria and is not a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 8 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>25' linear</u>) | | | | 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 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. |
| 1. <u>Cynodon dactylon</u> | 50 | Yes | FACU | |
| 2. <u>Sorghum halepense</u> | 30 | Yes | FACU | |
| 3. <u>Rudbeckia hirta</u> | 5 | No | FACU | |
| 4. <u>Rumex crispus</u> | 5 | No | FAC | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 90 = Total Cover | | | | |
| 50% of total cover: <u>45</u> | | 20% of total cover: <u>18</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 8 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|----------------|---|-------------------|------------------|--------------|---------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | (MLRA 153B, 153D) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | (outside MLRA 150A) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Depleted Matrix (F3) | (outside MLRA 150A, 150B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) | (MLRA 153B) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | (outside MLRA 138, 152A in FL, 154) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | (MLRA 153B, 153D) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) | |
| (LRR S, T, U) | <input type="checkbox"/> Very Shallow Dark Surface (F22) | |
| | (MLRA 138, 152A in FL, 154) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Hardpan
 Depth (inches): 2

Hydric Soil Present? Yes No

Remarks:
 Hard-compacted berm. Site does not meet hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/18/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 9 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S7 T18N R2E
 Landform (hillside, terrace, etc.): riparian zone Local relief (concave, convex, none): convex Slope (%): >0%
 Subregion (LRR or MLRA): LRR O Lat: 36.216051° Long: -90.911201° Datum: WGS 84
 Soil Map Unit Name: Patterson fine sandy loam, 0 to 1 percent slopes NWI classification: n/a
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Site does not meet all three criteria and is not in a wetland. | |

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | |
| Remarks: Site does not meet wetland hydrology criteria. | |

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

Sampling Point: DP 9 - RCM

| <u>Tree Stratum</u> (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------------------|------------------|--|
| 1. <u>Celtis laevigata</u> | <u>60</u> | <u>Yes</u> | <u>FACW</u> | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| <u>60</u> =Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: <u>30</u> | | 20% of total cover: <u>12</u> | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u>) | | | | |
| 1. <u>Quercus lyrata</u> | <u>25</u> | <u>Yes</u> | <u>OBL</u> | |
| 2. <u>Celtis laevigata</u> | <u>20</u> | <u>Yes</u> | <u>FACW</u> | |
| 3. <u>Ligustrum sp.*</u> | <u>10</u> | <u>No</u> | <u>FAC</u> | |
| 4. <u>Quercus phellos</u> | <u>2</u> | <u>No</u> | <u>FACW</u> | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| <u>57</u> =Total Cover | | | | |
| 50% of total cover: <u>29</u> | | 20% of total cover: <u>12</u> | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | |
| 1. <u>Ambrosia trifida</u> | <u>5</u> | <u>Yes</u> | <u>FAC</u> | ¹ 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| <u>5</u> =Total Cover | | | | |
| 50% of total cover: <u>3</u> | | 20% of total cover: <u>1</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: <u>30'</u>) | | | | |
| 1. <u>Toxicodendron radicans</u> | <u>60</u> | <u>Yes</u> | <u>FAC</u> | |
| 2. <u>Vitis sp.*</u> | <u>25</u> | <u>Yes</u> | <u>FAC</u> | |
| 3. <u>Smilax bona-nox</u> | <u>5</u> | <u>No</u> | <u>FAC</u> | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| <u>90</u> =Total Cover | | | | |
| 50% of total cover: <u>45</u> | | 20% of total cover: <u>18</u> | | |
| Hydrophytic Vegetation Present? Yes <u>X</u> No _____ | | | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of appendix. Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 9 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|----|---|---|---------|----------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 10YR 3/2 | 100 | | | | | Sandy | |
| 4-8 | 10YR 3/4 | 100 | | | | | Sandy | |
| 8-10 | 10YR 3/4 | 80 | 10YR 5/4 | 20 | C | M | Sandy | Faint redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes _____ No <u>X</u> | | | |
| Remarks: Significant roots and hardpan at 10". Site does not meet hydric soil criteria. | | | | | | | | |

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/18/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 10 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S6 T18N R2E
 Landform (hillside, terrace, etc.): field edge Local relief (concave, convex, none): convex Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.230561° Long: -90.904463° Datum: WGS 84
 Soil Map Unit Name: Patterson fine sandy loam, 0 to 1 percent slopes NWI classification: n/a
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Site does not meet all three criteria and is not in a wetland. | |

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) | Secondary Indicators (minimum of two required) |
| <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 10 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>30</u> x 2 = <u>60</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>50</u> x 4 = <u>200</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>80</u> (A) <u>260</u> (B) Prevalence Index = B/A = <u>3.25</u> |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | 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 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. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>20' linear</u>) | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 1. <u>Eleusine indica</u> | <u>30</u> | <u>Yes</u> | <u>FACU</u> | |
| 2. <u>Echinochloa crus-galli</u> | <u>30</u> | <u>Yes</u> | <u>FACW</u> | |
| 3. <u>Cynodon dactylon</u> | <u>10</u> | <u>No</u> | <u>FACU</u> | |
| 4. <u>Kummerowia striata</u> | <u>10</u> | <u>No</u> | <u>FACU</u> | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>40</u> | | 20% of total cover: <u>16</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 10 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|---|---|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-6 | 10YR 4/3 | 100 | | | | | Sandy | |
| 6-10 | 10YR 5/1 | 98 | 10YR 5/6 | 2 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes _____ No <u>X</u> | | | |
| Remarks: Site does not meet hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 11 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S31 T19N R2E
 Landform (hillside, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.239880° Long: -90.904734° Datum: WGS 84
 Soil Map Unit Name: McCrorry fine sandy loam, 0 to 1 percent slopes NWI classification: n/a
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Site meets all three criteria and is in a wetland. | |

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u>X</u> No <u> </u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 11 - RCM

| <u>Tree Stratum</u> (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------|------------------|--|
| 1. <u>Quercus phellos</u> | <u>25</u> | Yes | FACW | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>87.5%</u> (A/B) |
| 2. <u>Quercus nigra</u> | <u>20</u> | Yes | FAC | |
| 3. <u>Betula nigra</u> | <u>15</u> | Yes | FACW | |
| 4. <u>Liquidambar styraciflua</u> | <u>5</u> | No | FAC | |
| 5. <u>Fraxinus pennsylvanica</u> | <u>5</u> | No | FACW | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| _____ =Total Cover | <u>70</u> | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: <u>35</u> 20% of total cover: <u>14</u> | | | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>) | | | | Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. <u>Ligustrum sinense</u> | <u>15</u> | Yes | FAC | |
| 2. <u>Quercus phellos</u> | <u>10</u> | Yes | FACW | |
| 3. <u>Fraxinus pennsylvanica</u> | <u>5</u> | No | FACW | |
| 4. <u>Quercus lyrata</u> | <u>2</u> | No | OBL | |
| 5. <u>Quercus pagoda</u> | <u>2</u> | No | FAC | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| _____ =Total Cover | <u>34</u> | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: <u>17</u> 20% of total cover: <u>7</u> | | | | |
| <u>Herb Stratum</u> (Plot size: <u>5'</u>) | | | | 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 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. |
| 1. <u>Hibiscus grandiflorus</u> | <u>10</u> | Yes | OBL | |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| _____ =Total Cover | <u>10</u> | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 50% of total cover: <u>5</u> 20% of total cover: <u>2</u> | | | | |
| <u>Woody Vine Stratum</u> (Plot size: <u>30'</u>) | | | | |
| 1. <u>Convolvulus arvensis</u> | <u>20</u> | Yes | UPL | |
| 2. <u>Toxicodendron radicans</u> | <u>5</u> | Yes | FAC | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| _____ =Total Cover | <u>25</u> | | | |
| 50% of total cover: <u>13</u> 20% of total cover: <u>5</u> | | | | |

Remarks: (If observed, list morphological adaptations below.)
 Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 11 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|--|----|---|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 10YR 3/2 | 90 | 10YR 5/6 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 2-12 | 10YR 5/2 | 90 | 10YR 5/6 | 10 | C | PL/M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
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| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Remarks: 0-2" layer also contains 5% 10YR 5/2. Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 12 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S31 T19N R2E
 Landform (hillside, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.239675° Long: -90.905338° Datum: WGS 84
 Soil Map Unit Name: McCrorry fine sandy loam, 0 to 1 percent slopes NWI classification: n/a
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Site meets all three criteria and is a wetland. | |

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u>X</u> No <u> </u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 12 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | 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 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. |
| 1. <u><i>Symphytichum sp.*</i></u> | 30 | Yes | FACW | |
| 2. <u><i>Persecaria sp.*</i></u> | 20 | Yes | OBL | |
| 3. <u><i>Carex sp.*</i></u> | 20 | Yes | FACW | |
| 4. <u><i>Xanthium strumarium</i></u> | 10 | No | FAC | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>40</u> | | 20% of total cover: <u>16</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: <u>30'</u>) | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 1. <u><i>Campsis radicans</i></u> | 5 | Yes | FAC | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>3</u> | | 20% of total cover: <u>1</u> | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 12 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|----------------|----|--|----|---|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-5 | 10YR 4/2 | 80 | 10YR 5/8 | 20 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 5-10 | 10YR 6/1 | 80 | 10YR 5/8 | 20 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: | Hardpan (clay) | | | | | | | |
| Depth (inches): | 5 | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Remarks: Site meets hydric soil criteria. | | | | | | | | |

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 13 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S31 T19N R2E
 Landform (hillside, terrace, etc.): levee toe Local relief (concave, convex, none): convex Slope (%): 1%
 Subregion (LRR or MLRA): LRR O Lat: 36.239491° Long: -90.905290 Datum: WGS 84
 Soil Map Unit Name: McCrorry fine sandy loam, 0 to 1 percent slopes NWI classification: n/a
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Site does not meet all three criteria and is not in a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | |
| Remarks: Site does not meet wetland hydrology criteria. | |

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

Sampling Point: DP 13 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | 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 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. |
| 1. <u>Cynodon dactylon</u> | <u>90</u> | <u>Yes</u> | <u>FACU</u> | |
| 2. <u>Erigeron canadensis</u> | <u>10</u> | <u>No</u> | <u>FACU</u> | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: <u>30'</u>) | | | | |
| 1. <u>Brunnichia ovata</u> | <u>2</u> | <u>No</u> | <u>FACW</u> | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>1</u> | | 20% of total cover: <u>1</u> | | |

Remarks: (If observed, list morphological adaptations below.)
 Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 13 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|--|----|---|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 10YR 3/2 | 90 | 10YR 5/6 | 10 | C | M | Sandy | Prominent redox concentrations |
| 2-5 | 10YR 4/2 | 90 | 10YR 5/6 | 10 | C | M | Sandy | Prominent redox concentrations |
| 5-6 | 10YR 6/1 | 90 | 10YR 5/6 | 10 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input checked="" type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: | Hardpan | | | | | | | |
| Depth (inches): | 6 | | | | | | | |
| | | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | |
| Remarks: Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 14- RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S31 T19N R2E
 Landform (hillside, terrace, etc.): wetland edge Local relief (concave, convex, none): concave Slope (%): 5%
 Subregion (LRR or MLRA): LRR O Lat: 36.246719° Long: -90.903577° Datum: WGS 84
 Soil Map Unit Name: Dundee silt loam, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Site meets all three criteria and is a wetland. | |

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 14- RCM

| | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|---------------------|------------------|--|
| Tree Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u>Quercus nigra</u> | <u>60</u> | Yes | FAC | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>87.5%</u> (A/B) |
| 2. <u>Quercus phellos</u> | <u>40</u> | Yes | FACW | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| _____ | <u>100</u> | =Total Cover | | |
| 50% of total cover: <u>50</u> | <u>20</u> | 20% of total cover: | | |
| Sapling/Shrub Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u>Forestiera acuminata</u> | <u>10</u> | Yes | OBL | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 2. <u>Celtis laevigata</u> | <u>10</u> | Yes | FACW | |
| 3. <u>Quercus nigra</u> | <u>5</u> | Yes | FAC | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| _____ | <u>25</u> | =Total Cover | | |
| 50% of total cover: <u>13</u> | <u>5</u> | 20% of total cover: | | |
| Herb Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u>Triticum aestivum</u> | <u>30</u> | Yes | UPL | Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. <u>Arundinaria gigantea</u> | <u>10</u> | Yes | FACW | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| _____ | <u>40</u> | =Total Cover | | |
| 50% of total cover: <u>20</u> | <u>8</u> | 20% of total cover: | | |
| Woody Vine Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u>Campsis radicans</u> | <u>10</u> | Yes | 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| _____ | <u>10</u> | =Total Cover | | |
| 50% of total cover: <u>5</u> | <u>2</u> | 20% of total cover: | | |
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | | |

Remarks: (If observed, list morphological adaptations below.)
 Site meets hydrophytic vegetation criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 15 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S20 T19N R2E
 Landform (hillside, terrace, etc.): woodline Local relief (concave, convex, none): convex Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.267122° Long: -90.882077° Datum: WGS 84
 Soil Map Unit Name: Amagon silt loam NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Site meets all three criteria and is in a wetland. | |

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u>X</u> No <u> </u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 15 - RCM

| <u>Tree Stratum</u> (Plot size: <u>10' linear</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|-------------------------------|-------------------|------------------|--|
| 1. <u>Quercus nigra</u> | <u>90</u> | Yes | FAC | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| <u>90</u> =Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: <u>45</u> | 20% of total cover: <u>18</u> | | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>10' linear</u>) | | | | Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. <u>Ligustrum sinense</u> | <u>20</u> | Yes | FAC | |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| <u>20</u> =Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: <u>10</u> | 20% of total cover: <u>4</u> | | | |
| <u>Herb Stratum</u> (Plot size: <u>10' linear</u>) | | | | 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 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. |
| 1. <u>Persicaria sp.*</u> | <u>10</u> | Yes | OBL | |
| 2. <u>Triticum aestivum</u> | <u>2</u> | No | UPL | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| <u>12</u> =Total Cover | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 50% of total cover: <u>6</u> | 20% of total cover: <u>3</u> | | | |
| <u>Woody Vine Stratum</u> (Plot size: <u>10' linear</u>) | | | | |
| 1. <u>Toxicodendron radicans</u> | <u>20</u> | Yes | FAC | |
| 2. <u>Campsis radicans</u> | <u>20</u> | Yes | FAC | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| <u>40</u> =Total Cover | | | | |
| 50% of total cover: <u>20</u> | 20% of total cover: <u>8</u> | | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site meets hydrophytic vegetation criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 16 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S21 T19N R2E
 Landform (hillside, terrace, etc.): agricultural field Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.274609 Long: -90.869771 Datum: WGS 84
 Soil Map Unit Name: Amagon silt loam NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Site does not meet all three criteria and is not a wetland. | |

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 16 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | 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 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. |
| 1. <u>Cynodon dactylon</u> | 70 | Yes | FACU | |
| 2. <u>Paspalum sp.*</u> | 25 | Yes | FAC | |
| 3. <u>Rumex crispus</u> | 5 | No | FAC | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site does not meet hydrophytic vegetation criteria.

SOILSampling Point: DP 16 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|--|---------------|----|--|---|--|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-12 | 10YR 3/2 | 98 | 10YR 5/6 | 2 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | | Indicators for Problematic Hydric Soils³: | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | <input type="checkbox"/> (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | <input type="checkbox"/> (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input type="checkbox"/> Depleted Matrix (F3) | | | <input type="checkbox"/> (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | <input type="checkbox"/> (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | <input type="checkbox"/> (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | <input type="checkbox"/> (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | <input type="checkbox"/> (MLRA 149A, 153C, 153D) | | | | | |
| <input type="checkbox"/> (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | <input type="checkbox"/> (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | | Hydric Soil Present? Yes _____ No <u>X</u> _____ | | |
| Remarks: Site does not meet hydric soil criteria. | | | | | | | | |

| | |
|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | <i>OMB Control #: 0710-0024, Exp: 11/30/2024</i> <i>Requirement Control Symbol EXEMPT:</i> <i>(Authority: AR 335-15, paragraph 5-2a)</i> |
|--|--|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 17 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S15 T19N R2E
 Landform (hillside, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.286001° Long: -90.850772° Datum: WGS 84
 Soil Map Unit Name: Amagon silt loam NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Site meets all three criteria and is not in a wetland. | |

HYDROLOGY

| | |
|---|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 17 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | 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 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. |
| 1. <u>Leersia oryzoides</u> | 25 | Yes | OBL | |
| 2. <u>Rhynchospora sp.*</u> | 25 | Yes | OBL | |
| 3. <u>Carex hystericina</u> | 20 | Yes | OBL | |
| 4. <u>Persicaria sp.*</u> | 10 | No | OBL | |
| 5. <u>Juncus effusus</u> | 10 | No | OBL | |
| 6. <u>Persicaria sp. 2*</u> | 10 | No | OBL | |
| 7. <u>Tripsacum dactyloides</u> | 5 | No | FAC | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 105 = Total Cover | | | | |
| 50% of total cover: <u>53</u> | | 20% of total cover: <u>21</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 17 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|----------------|----|-------------------|------------------|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | |
| 2-12 | 10YR 4/2 | 85 | 10YR 5/6 | 15 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (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 (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)**
- Polyvalue Below Surface (S8) **(LRR S, T, U)**
- Thin Dark Surface (S9) **(LRR S, T, U)**
- Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- Loamy Mucky Mineral (F1) **(LRR O)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) **(LRR U)**
- Depleted Ochric (F11) **(MLRA 151)**
- Iron-Manganese Masses (F12) **(LRR O, P, T)**
- Umbric Surface (F13) **(LRR P, T, U)**
- Delta Ochric (F17) **(MLRA 151)**
- Reduced Vertic (F18) **(MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) **(LRR O)**
- 2 cm Muck (A10) **(LRR S)**
- Coast Prairie Redox (A16) **(outside MLRA 150A)**
- Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(LRR P, T)**
- Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Site meets hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 18 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S15 T19N R2E
 Landform (hillside, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.286023° Long: -90.850825° Datum: WGS 84
 Soil Map Unit Name: Amagon silt loam NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Site meets all three criteria and is in a wetland. | |

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u>X</u> No <u> </u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 18 - RCM

| | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| Tree Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u>Forestiera acuminata</u> | <u>80</u> | Yes | OBL | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. <u>Acer rubrum</u> | <u>25</u> | Yes | FAC | |
| 3. <u>Ulmus rubra</u> | <u>10</u> | No | FAC | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| <u>115</u> =Total Cover | | | | |
| 50% of total cover: <u>58</u> | | 20% of total cover: <u>23</u> | | |
| Sapling/Shrub Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u>Forestiera acuminata</u> | <u>35</u> | Yes | OBL | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| <u>35</u> =Total Cover | | | | |
| 50% of total cover: <u>18</u> | | 20% of total cover: <u>7</u> | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. _____ | | | | Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| _____ =Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| Woody Vine Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u>Smilax bona-nox</u> | <u>5</u> | Yes | 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| <u>5</u> =Total Cover | | | | |
| 50% of total cover: <u>3</u> | | 20% of total cover: <u>1</u> | | |
| | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |

Remarks: (If observed, list morphological adaptations below.)
 Buttressed roots. Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 18 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|----------------|----|-------------------|------------------|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-10 | 10YR 4/2 | 80 | 10YR 5/6 | 20 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 10-14 | 10YR 5/2 | 85 | 10YR 5/6 | 15 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | (MLRA 153B, 153D) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | (outside MLRA 150A) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | (outside MLRA 150A, 150B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) | (MLRA 153B) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | (outside MLRA 138, 152A in FL, 154) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | (MLRA 153B, 153D) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) | |
| (LRR S, T, U) | <input type="checkbox"/> Very Shallow Dark Surface (F22) | |
| | (MLRA 138, 152A in FL, 154) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:
 Site meets hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Pocahontas/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 19 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S15 T19N R2E
 Landform (hillside, terrace, etc.): field edge Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.286352° Long: -90.850423° Datum: WGS 84
 Soil Map Unit Name: Amagon silt loam NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Site does not meet all three wetland criteria and is not a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 19 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------|------------------|---|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ =Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ 20% of total cover: _____ | | | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>20' linear</u>) | | | | |
| 1. <u>Celtis laevigata</u> | <u>5</u> | <u>Yes</u> | <u>FACW</u> | |
| 2. <u>Quercus pagoda</u> | <u>2</u> | <u>Yes</u> | <u>FAC</u> | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ =Total Cover | | | | |
| 50% of total cover: <u>4</u> 20% of total cover: <u>2</u> | | | | |
| <u>Herb Stratum</u> (Plot size: <u>20' linear</u>) | | | | |
| 1. <u>Triticum aestivum</u> | <u>90</u> | <u>Yes</u> | <u>UPL</u> | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ =Total Cover | | | | |
| 50% of total cover: <u>45</u> 20% of total cover: <u>18</u> | | | | |
| <u>Woody Vine Stratum</u> (Plot size: <u>20' linear</u>) | | | | |
| 1. <u>Apios americana</u> | <u>5</u> | <u>Yes</u> | <u>FACW</u> | |
| 2. <u>Convolvulus arvensis</u> | <u>5</u> | <u>Yes</u> | <u>UPL</u> | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ =Total Cover | | | | |
| 50% of total cover: <u>5</u> 20% of total cover: <u>2</u> | | | | |
| Hydrophytic Vegetation Present? Yes <u>X</u> No _____ | | | | |

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
 ___ 3 - Prevalence Index is ≤3.0¹
 ___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) 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 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.

Remarks: (If observed, list morphological adaptations below.)
 Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 19 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|----------------|---|-------------------|------------------|--------------|---------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-12 | 10YR 3/4 | 100 | | | | | Loamy/Clayey | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1) Thin Dark Surface (S9) **(LRR S, T, U)**
- Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12)
- Black Histic (A3) **(MLRA 153B, 153D)**
- Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) **(LRR O)**
- Stratified Layers (A5) Loamy Gleyed Matrix (F2)
- Organic Bodies (A6) **(LRR P, T, U)** Depleted Matrix (F3)
- 5 cm Mucky Mineral (A7) **(LRR P, T, U)** Redox Dark Surface (F6)
- Muck Presence (A8) **(LRR U)** Depleted Dark Surface (F7)
- 1 cm Muck (A9) **(LRR P, T)** Redox Depressions (F8)
- Depleted Below Dark Surface (A11) Marl (F10) **(LRR U)**
- Thick Dark Surface (A12) Depleted Ochric (F11) **(MLRA 151)**
- Coast Prairie Redox (A16) **(MLRA 150A)** Iron-Manganese Masses (F12) **(LRR O, P, T)**
- Sandy Mucky Mineral (S1) **(LRR O, S)** Umbric Surface (F13) **(LRR P, T, U)**
- Sandy Gleyed Matrix (S4) Delta Ochric (F17) **(MLRA 151)**
- Sandy Redox (S5) Reduced Vertic (F18) **(MLRA 150A, 150B)**
- Stripped Matrix (S6) Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- Dark Surface (S7) **(LRR P, S, T, U)** Anomalous Bright Floodplain Soils (F20)
- Polyvalue Below Surface (S8) **(LRR S, T, U)** **(MLRA 149A, 153C, 153D)**
- Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) **(LRR O)**
- 2 cm Muck (A10) **(LRR S)**
- Coast Prairie Redox (A16) **(outside MLRA 150A)**
- Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(LRR P, T)**
- Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Site does not meet hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Biggers/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 20 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S14 T19N R2E
 Landform (hillside, terrace, etc.): forested wetland Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.290071° Long: -90.839806° Datum: WGS 84
 Soil Map Unit Name: Dundee silt loam, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Site meets all three criteria and is in a wetland. | |

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 20 - RCM

| <u>Tree Stratum</u> (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. <u>Fraxinus pennsylvanica</u> | <u>50</u> | Yes | FACW | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. <u>Taxodium distichum</u> | <u>25</u> | Yes | OBL | |
| 3. <u>Celtis laevigata</u> | <u>20</u> | No | FACW | |
| 4. <u>Ulmus rubra</u> | <u>10</u> | No | FAC | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| <u>105</u> =Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: <u>53</u> | | 20% of total cover: <u>21</u> | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>) | | | | Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. <u>Celtis laevigata</u> | <u>10</u> | Yes | FACW | |
| 2. <u>Forestiera acuminata</u> | <u>10</u> | Yes | OBL | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| <u>20</u> =Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: <u>10</u> | | 20% of total cover: <u>4</u> | | |
| <u>Herb Stratum</u> (Plot size: _____) | | | | 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 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. |
| 1. _____ | | | | |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| _____ =Total Cover | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Woody Vine Stratum</u> (Plot size: <u>30'</u>) | | | | |
| 1. <u>Brunnichia ovata</u> | <u>20</u> | Yes | FACW | |
| 2. <u>Smilax bona-nox</u> | <u>5</u> | Yes | FAC | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| <u>25</u> =Total Cover | | | | |
| 50% of total cover: <u>13</u> | | 20% of total cover: <u>5</u> | | |

Remarks: (If observed, list morphological adaptations below.)
 Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 20 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|----------------|---|-------------------|------------------|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-10 | 10YR 4/2 | 90 | 10YR 5/8 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 10-12 | 10YR 4/2 | 95 | 10YR 6/1 | 5 | D | M | Loamy/Clayey | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (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 (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)**
- Polyvalue Below Surface (S8) **(LRR S, T, U)**
- Thin Dark Surface (S9) **(LRR S, T, U)**
- Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- Loamy Mucky Mineral (F1) **(LRR O)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) **(LRR U)**
- Depleted Ochric (F11) **(MLRA 151)**
- Iron-Manganese Masses (F12) **(LRR O, P, T)**
- Umbric Surface (F13) **(LRR P, T, U)**
- Delta Ochric (F17) **(MLRA 151)**
- Reduced Vertic (F18) **(MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) **(LRR O)**
- 2 cm Muck (A10) **(LRR S)**
- Coast Prairie Redox (A16) **(outside MLRA 150A)**
- Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(LRR P, T)**
- Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

0-10" layer has depleted 5% 10YR 6/1 in the matrix. Site meets hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Biggers/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 21 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S14 T19N R2E
 Landform (hillside, terrace, etc.): forested wetland edge Local relief (concave, convex, none): convex Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.289949° Long: -90.839863° Datum: WGS 84
 Soil Map Unit Name: Dundee silt loam, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Site does not meet all three criteria and is not a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 21 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ 20% of total cover: _____ | | | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>) | | | | |
| 1. <u>Celtis laevigata</u> | <u>15</u> | <u>Yes</u> | <u>FACW</u> | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>8</u> 20% of total cover: <u>3</u> | | | | |
| <u>Herb Stratum</u> (Plot size: <u>5'</u>) | | | | |
| 1. <u>Triticum aestivum</u> | <u>60</u> | <u>Yes</u> | <u>UPL</u> | ¹ 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. |
| 2. <u>Digitaria ciliaris</u> | <u>40</u> | <u>Yes</u> | <u>FACU</u> | |
| 3. <u>Ambrosia trifida</u> | <u>5</u> | <u>No</u> | <u>FAC</u> | |
| 4. <u>Allium sp.*</u> | <u>5</u> | <u>No</u> | <u>FACU</u> | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>55</u> 20% of total cover: <u>22</u> | | | | |
| <u>Woody Vine Stratum</u> (Plot size: <u>30'</u>) | | | | |
| 1. <u>Toxicodendron radicans</u> | <u>20</u> | <u>Yes</u> | <u>FAC</u> | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>10</u> 20% of total cover: <u>4</u> | | | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 21 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|----------------|---|-------------------|------------------|--------------|---------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-5 | 10YR 3/3 | 100 | | | | | Loamy/Clayey | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | (MLRA 153B, 153D) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | (outside MLRA 150A) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Depleted Matrix (F3) | (outside MLRA 150A, 150B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) | (MLRA 153B) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | (outside MLRA 138, 152A in FL, 154) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | (MLRA 153B, 153D) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) | |
| (LRR S, T, U) | <input type="checkbox"/> Very Shallow Dark Surface (F22) | |
| | (MLRA 138, 152A in FL, 154) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: hardpan clay
 Depth (inches): 5

Hydric Soil Present? Yes No

Remarks:

Site does not meet hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Biggers/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 22 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S14 T19N R2E
 Landform (hillside, terrace, etc.): forested wetland Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.293331° Long: -90.834330° Datum: WGS 84
 Soil Map Unit Name: McCrary fine sandy loam, 0 to 1 percent slopes NWI classification: n/a
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Site meets all three criteria and is a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u>X</u> No <u> </u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 22 - RCM

| <u>Tree Stratum</u> (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|---|
| 1. <u>Quercus phellos</u> | 60 | Yes | FACW | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. <u>Diospyros virginiana</u> | 25 | Yes | FAC | |
| 3. <u>Populus deltoides</u> | 10 | No | FAC | |
| 4. <u>Acer saccharinum</u> | 10 | No | FAC | |
| 5. <u>Ulmus rubra</u> | 10 | No | FAC | |
| 6. <u>Carya cordiformis</u> | 5 | No | FACU | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 120 =Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: <u>60</u> | | 20% of total cover: <u>24</u> | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>) | | | | Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. <u>Celtis laevigata</u> | 10 | Yes | FACW | |
| 2. <u>Fraxinus pennsylvanica</u> | 10 | Yes | FACW | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 20 =Total Cover | | | | |
| 50% of total cover: <u>10</u> | | 20% of total cover: <u>4</u> | | |
| <u>Herb Stratum</u> (Plot size: <u>5'</u>) | | | | |
| 1. <u>Persicaria sp.*</u> | 5 | Yes | OBL | |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| 5 =Total Cover | | | | |
| 50% of total cover: <u>3</u> | | 20% of total cover: <u>1</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: <u>30'</u>) | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| 1. <u>Campsis radicans</u> | 30 | Yes | FAC | |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 30 =Total Cover | | | | |
| 50% of total cover: <u>15</u> | | 20% of total cover: <u>6</u> | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at the end of appendix. Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 22 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|---|--|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | |
| 2-10 | 10YR 4/2 | 95 | 10YR 5/6 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 10-12 | 10YR 5/2 | 95 | 10YR 5/6 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Remarks: Site meets hydric soil criteria. | | | | | | | | |

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Biggers/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 23- RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S14 T19N R2E
 Landform (hillside, terrace, etc.): field edge Local relief (concave, convex, none): convex Slope (%): 2%
 Subregion (LRR or MLRA): LRR O Lat: 36.292986° Long: -90.834660° Datum: WGS 84
 Soil Map Unit Name: McCrorry fine sandy loam, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Site does not meet all three criteria and is not a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 23- RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>15</u> x 1 = <u>15</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>85</u> x 4 = <u>340</u> UPL species <u>5</u> x 5 = <u>25</u> Column Totals: <u>105</u> (A) <u>380</u> (B) Prevalence Index = B/A = <u>3.62</u> |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>5'</u>) | | | | |
| 1. <u>Cynodon dactylon</u> | 60 | Yes | FACU | ¹ 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. |
| 2. <u>Ambrosia artemisiifolia</u> | 20 | No | FACU | |
| 3. <u>Persicaria sp.*</u> | 15 | No | OBL | |
| 4. <u>Erigeron canadensis</u> | 5 | No | FACU | |
| 5. <u>Setaria faberi</u> | 5 | No | UPL | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>53</u> | | 20% of total cover: <u>21</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 23- RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|---|---|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-1 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | |
| 1-8 | 10YR 4/3 | 98 | 10YR 5/6 | 2 | C | M | Loamy/Clayey | Distinct redox concentrations |
| 8-14 | 10YR 5/2 | 98 | 10YR 5/6 | 2 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes _____ No <u>X</u> | | | |
| Remarks: Site does not meet hydric soil criteria. | | | | | | | | |

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Biggers/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 24 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S5 T19N R3E
 Landform (hillside, terrace, etc.): field berm Local relief (concave, convex, none): concave Slope (%): 2%
 Subregion (LRR or MLRA): LRR O Lat: 36.321089° Long: -90.777764° Datum: WGS 84
 Soil Map Unit Name: Broseley loamy fine sand, undulating NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Site meets all three criteria and is a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|---|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u>X</u> No <u> </u> |
|---|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 24 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | |
|---|------------------|-------------------------------|------------------|--|-------------------|--------------|-----------------------|-----------------|-----------------------|-----------------|----------------------|----------------|------------------------|------------------|----------------------|-----------------|-------------------------------|----------------|--------------------------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B) | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>90</u></td> <td>x 1 = <u>90</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>80</u></td> <td>x 4 = <u>320</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>180</u> (A)</td> <td><u>445</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.47</u></td> </tr> </table> | Total % Cover of: | Multiply by: | OBL species <u>90</u> | x 1 = <u>90</u> | FACW species <u>5</u> | x 2 = <u>10</u> | FAC species <u>0</u> | x 3 = <u>0</u> | FACU species <u>80</u> | x 4 = <u>320</u> | UPL species <u>5</u> | x 5 = <u>25</u> | Column Totals: <u>180</u> (A) | <u>445</u> (B) | Prevalence Index = B/A = <u>2.47</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | |
| OBL species <u>90</u> | x 1 = <u>90</u> | | | | | | | | | | | | | | | | | | | |
| FACW species <u>5</u> | x 2 = <u>10</u> | | | | | | | | | | | | | | | | | | | |
| FAC species <u>0</u> | x 3 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FACU species <u>80</u> | x 4 = <u>320</u> | | | | | | | | | | | | | | | | | | | |
| UPL species <u>5</u> | x 5 = <u>25</u> | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>180</u> (A) | <u>445</u> (B) | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>2.47</u> | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | | | | | | | | | | | | | | | | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | | | | | | | | | | | | | | | | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | 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 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. | | | | | | | | | | | | | | | | |
| 1. <u><i>Pueraria montana</i></u> | <u>80</u> | <u>Yes</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 2. <u><i>Leersia oryzoides</i></u> | <u>65</u> | <u>Yes</u> | <u>OBL</u> | | | | | | | | | | | | | | | | | |
| 3. <u><i>Persicaria sp.*</i></u> | <u>25</u> | <u>No</u> | <u>OBL</u> | | | | | | | | | | | | | | | | | |
| 4. <u><i>Setaria faberi</i></u> | <u>5</u> | <u>No</u> | <u>UPL</u> | | | | | | | | | | | | | | | | | |
| 5. <u><i>Echinochloa crus-galli</i></u> | <u>5</u> | <u>No</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 9. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 10. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 11. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 12. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| <u>180</u> = Total Cover | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>90</u> | | 20% of total cover: <u>36</u> | | | | | | | | | | | | | | | | | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | | | | | | | | | | | | | | | | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 24 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|----------------|----|-------------------|------------------|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-12 | 10YR 4/1 | 90 | 10YR 5/6 | 10 | C | PL/M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (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 (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)**
- Polyvalue Below Surface (S8) **(LRR S, T, U)**
- Thin Dark Surface (S9) **(LRR S, T, U)**
- Barrier Islands 1 cm Muck (S12) **(MLRA 153B, 153D)**
- Loamy Mucky Mineral (F1) **(LRR O)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) **(LRR U)**
- Depleted Ochric (F11) **(MLRA 151)**
- Iron-Manganese Masses (F12) **(LRR O, P, T)**
- Umbric Surface (F13) **(LRR P, T, U)**
- Delta Ochric (F17) **(MLRA 151)**
- Reduced Vertic (F18) **(MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- Anomalous Bright Floodplain Soils (F20) **(MLRA 149A, 153C, 153D)**
- Very Shallow Dark Surface (F22) **(MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) **(LRR O)**
- 2 cm Muck (A10) **(LRR S)**
- Coast Prairie Redox (A16) **(outside MLRA 150A)**
- Reduced Vertic (F18) **(outside MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) **(LRR P, T)**
- Anomalous Bright Floodplain Soils (F20) **(MLRA 153B)**
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22) **(outside MLRA 138, 152A in FL, 154)**
- Barrier Islands Low Chroma Matrix (TS7) **(MLRA 153B, 153D)**
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Site meets hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Biggers/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 25 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S5 T19N R3E
 Landform (hillside, terrace, etc.): field Local relief (concave, convex, none): convex Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.321032° Long: -90.777428° Datum: WGS 84
 Soil Map Unit Name: Broseley loamy fine sand, undulating NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> |
| Remarks: Site does not meet all three criteria and is not a wetland. | |

HYDROLOGY

| | |
|---|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u> </u> No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 25 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | 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 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. |
| 1. <u>Pueraria montana</u> | <u>100</u> | <u>Yes</u> | <u>FACU</u> | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 25 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|----------------|---|-------------------|------------------|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 10YR 3/2 | 98 | 10YR 5/6 | 2 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 2-10 | 10YR 4/3 | 95 | 10YR 5/6 | 5 | C | M | Loamy/Clayey | Distinct redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (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 (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)
- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Barrier Islands 1 cm Muck (S12) (MLRA 153B, 153D)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Floodplain Soils (F20) (MLRA 149A, 153C, 153D)
- Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Coast Prairie Redox (A16) (outside MLRA 150A)
- Reduced Vertic (F18) (outside MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (LRR P, T)
- Anomalous Bright Floodplain Soils (F20) (MLRA 153B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22) (outside MLRA 138, 152A in FL, 154)
- Barrier Islands Low Chroma Matrix (TS7) (MLRA 153B, 153D)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Site does not meet hydric soil criteria.

| | |
|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|--|

Project/Site: Highway 67 EIS City/County: Biggers/Randolph Sampling Date: 7/19/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 26 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S5 T19N R3E
 Landform (hillside, terrace, etc.): farmed wetland Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.322567° Long: -90.769177° Datum: WGS 84
 Soil Map Unit Name: Bosket fine sandy loam, 0 to 3 percent slopes NWI classification: n/a
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes No X
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Vegetation significantly disturbed by farming. Aerial imagery shows frequent saturation and on-site investigations discovered the presence of algal crust and hydric soils. Based on best available data, the area is a farmed wetland. | |

HYDROLOGY

| | |
|---|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u>X</u> No <u> </u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Artificial irrigation. Site meets wetland hydrology criteria.

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

Sampling Point: DP 26 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | |
|---|------------------|-------------------|------------------|---|-------------------|--------------|----------------------|----------------|-----------------------|----------------|----------------------|----------------|-------------------------|------------------|----------------------|----------------|-------------------------------|----------------|--------------------------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>100</u></td> <td>x 4 = <u>400</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>400</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.00</u></td> </tr> </table> | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>0</u> | x 2 = <u>0</u> | FAC species <u>0</u> | x 3 = <u>0</u> | FACU species <u>100</u> | x 4 = <u>400</u> | UPL species <u>0</u> | x 5 = <u>0</u> | Column Totals: <u>100</u> (A) | <u>400</u> (B) | Prevalence Index = B/A = <u>4.00</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FACW species <u>0</u> | x 2 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FAC species <u>0</u> | x 3 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FACU species <u>100</u> | x 4 = <u>400</u> | | | | | | | | | | | | | | | | | | | |
| UPL species <u>0</u> | x 5 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>100</u> (A) | <u>400</u> (B) | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>4.00</u> | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: _____ 20% of total cover: _____ | | | | | | | | | | | | | | | | | | | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: _____ 20% of total cover: _____ | | | | | | | | | | | | | | | | | | | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Gossypium hirsutum</u> | <u>100</u> | <u>Yes</u> | <u>FACU</u> | Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 9. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 10. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 11. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 12. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>50</u> 20% of total cover: <u>20</u> | | | | | | | | | | | | | | | | | | | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: _____ 20% of total cover: _____ | | | | | | | | | | | | | | | | | | | | |

Remarks: (If observed, list morphological adaptations below.)
 Site disturbed by agriculture.

SOIL

Sampling Point: DP 26 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|----------------|---|-------------------|------------------|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-14 | 10YR 4/2 | 98 | 10YR 5/8 | 2 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

| | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | (MLRA 153B, 153D) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | (outside MLRA 150A) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | (outside MLRA 150A, 150B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Redox Depressions (F8) | (MLRA 153B) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | (outside MLRA 138, 152A in FL, 154) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | (MLRA 153B, 153D) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) | |
| (LRR S, T, U) | <input type="checkbox"/> Very Shallow Dark Surface (F22) | |
| | (MLRA 138, 152A in FL, 154) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Site meets hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 27 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S34 T20N R3E
 Landform (hillside, terrace, etc.): wooded flat Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.330689° Long: -90.750047° Datum: WGS 84
 Soil Map Unit Name: Amagon silt loam NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Depressional area is included. No connection to 2OW80 to the south. Site meets all three criteria and is a wetland. | |

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 27 - RCM

| | Absolute % Cover | Dominant Species? | Indicator Status | | |
|---|------------------|-------------------------------|------------------|--|--|
| Tree Stratum (Plot size: <u>30'</u>) | | | | | |
| 1. <u><i>Robinia pseudoacacia</i></u> | <u>60</u> | Yes | UPL | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>62.5%</u> (A/B) | |
| 2. <u><i>Quercus phellos</i></u> | <u>40</u> | Yes | FACW | | |
| 3. _____ | | | | | |
| 4. _____ | | | | | |
| 5. _____ | | | | | |
| 6. _____ | | | | | |
| 7. _____ | | | | | |
| 8. _____ | | | | | |
| _____ =Total Cover | <u>100</u> | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ | |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | | |
| Sapling/Shrub Stratum (Plot size: <u>30'</u>) | | | | | |
| 1. <u><i>Celtis laevigata</i></u> | <u>5</u> | Yes | FACW | | |
| 2. <u><i>Fraxinus pennsylvanica</i></u> | <u>5</u> | Yes | FACW | | |
| 3. _____ | | | | | |
| 4. _____ | | | | | |
| 5. _____ | | | | | |
| 6. _____ | | | | | |
| 7. _____ | | | | | |
| 8. _____ | | | | | |
| _____ =Total Cover | <u>10</u> | | | | |
| 50% of total cover: <u>5</u> | | 20% of total cover: <u>2</u> | | | |
| Herb Stratum (Plot size: <u>30'</u>) | | | | | |
| 1. <u><i>Festuca sp.*</i></u> | <u>60</u> | Yes | UPL | ¹ 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. | |
| 2. <u><i>Carex sp.*</i></u> | <u>50</u> | Yes | FACW | | |
| 3. _____ | | | | | |
| 4. _____ | | | | | |
| 5. _____ | | | | | |
| 6. _____ | | | | | |
| 7. _____ | | | | | |
| 8. _____ | | | | | |
| 9. _____ | | | | | |
| 10. _____ | | | | | |
| 11. _____ | | | | | |
| 12. _____ | | | | | |
| _____ =Total Cover | <u>110</u> | | | | |
| 50% of total cover: <u>55</u> | | 20% of total cover: <u>22</u> | | | |
| Woody Vine Stratum (Plot size: <u>30'</u>) | | | | | |
| 1. <u><i>Toxicodendron radicans</i></u> | <u>10</u> | Yes | FAC | | |
| 2. <u><i>Lonicera japonica</i></u> | <u>10</u> | Yes | FACU | | |
| 3. _____ | | | | | |
| 4. _____ | | | | | |
| 5. _____ | | | | | |
| _____ =Total Cover | <u>20</u> | | | | |
| 50% of total cover: <u>10</u> | | 20% of total cover: <u>4</u> | | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site meets hydrophytic vegetation criteria.

Hydrophytic Vegetation Present? Yes X No _____

| | |
|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|--|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 28- RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S34 T20N R3E
 Landform (hillside, terrace, etc.): forested slope Local relief (concave, convex, none): convex Slope (%): 2%
 Subregion (LRR or MLRA): LRR O Lat: 36.330472° Long: -90.750240° Datum: WGS 84
 Soil Map Unit Name: Amagon silt loam, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Site does not meet all three criteria and is not in a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 28- RCM

| <u>Tree Stratum</u> (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|------------------------------|------------------|--|
| 1. <u><i>Robinia pseudoacacia</i></u> | <u>30</u> | Yes | UPL | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| <u>30</u> =Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: <u>15</u> | | 20% of total cover: <u>6</u> | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u>) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. <u><i>Juglans nigra</i></u> | <u>25</u> | Yes | UPL | |
| 2. <u><i>Quercus alba</i></u> | <u>5</u> | No | FACU | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| <u>30</u> =Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: <u>15</u> | | 20% of total cover: <u>6</u> | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | 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 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. |
| 1. <u><i>Festuca sp.*</i></u> | <u>20</u> | Yes | FACU | |
| 2. <u><i>Sorghum halepense</i></u> | <u>15</u> | Yes | FACU | |
| 3. <u><i>Symphotrichum sp.*</i></u> | <u>10</u> | Yes | FACW | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| <u>45</u> =Total Cover | | | | Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u> |
| 50% of total cover: <u>23</u> | | 20% of total cover: <u>9</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: <u>30'</u>) | | | | |
| 1. <u><i>Campsis radicans</i></u> | <u>5</u> | Yes | FAC | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| <u>5</u> =Total Cover | | | | |
| 50% of total cover: <u>3</u> | | 20% of total cover: <u>1</u> | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 28- RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|----------------|---|-------------------|------------------|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-8 | 10YR 4/2 | 98 | 10YR 5/8 | 2 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U)
- Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12)
- Black Histic (A3) **(MLRA 153B, 153D)**
- Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O)
- Stratified Layers (A5) Loamy Gleyed Matrix (F2)
- Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3)
- 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6)
- Muck Presence (A8) (LRR U) Depleted Dark Surface (F7)
- 1 cm Muck (A9) (LRR P, T) Redox Depressions (F8)
- Depleted Below Dark Surface (A11) Marl (F10) (LRR U)
- Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151)
- Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T)
- Sandy Mucky Mineral (S1) (LRR O, S) Umbric Surface (F13) (LRR P, T, U)
- Sandy Gleyed Matrix (S4) Delta Ochric (F17) (MLRA 151)
- Sandy Redox (S5) Reduced Vertic (F18) (MLRA 150A, 150B)
- Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A)
- Dark Surface (S7) (LRR P, S, T, U) Anomalous Bright Floodplain Soils (F20)
- Polyvalue Below Surface (S8) **(MLRA 149A, 153C, 153D)**
- (LRR S, T, U) Very Shallow Dark Surface (F22)
- (MLRA 138, 152A in FL, 154)**

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Coast Prairie Redox (A16)
- (outside MLRA 150A)**
- Reduced Vertic (F18)
- (outside MLRA 150A, 150B)**
- Piedmont Floodplain Soils (F19) (LRR P, T)
- Anomalous Bright Floodplain Soils (F20)
- (MLRA 153B)**
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- (outside MLRA 138, 152A in FL, 154)**
- Barrier Islands Low Chroma Matrix (TS7)
- (MLRA 153B, 153D)**
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Roots / hardpan
 Depth (inches): 8

Hydric Soil Present? Yes No

Remarks:

Site meets hydric soil criteria.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 29 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S34 T20N R3E
 Landform (hillside, terrace, etc.): forested wetland Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.335926° Long: -90.739617° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Site meets all three criteria and is in a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 29 - RCM

| | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|-------------------------|-------------------------------|------------------|--|
| Tree Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u><i>Carya cordiformis</i></u> | <u>70</u> | Yes | FACW | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B) |
| 2. <u><i>Ulmus americana</i></u> | <u>20</u> | No | FAC | |
| 3. <u><i>Quercus pagoda</i></u> | <u>20</u> | No | FAC | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| | <u>110</u> =Total Cover | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: <u>55</u> | | 20% of total cover: <u>22</u> | | |
| Sapling/Shrub Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u><i>Ostrya virginiana</i></u> | <u>20</u> | Yes | FACU | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| | <u>20</u> =Total Cover | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: <u>10</u> | | 20% of total cover: <u>4</u> | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. _____ | | | | 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 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. |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| | _____ =Total Cover | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| Woody Vine Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u><i>Campsis radicans</i></u> | <u>5</u> | Yes | FAC | |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| | <u>5</u> =Total Cover | | | |
| 50% of total cover: <u>3</u> | | 20% of total cover: <u>1</u> | | |

Remarks: (If observed, list morphological adaptations below.)
 Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 29 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|---|---|-------------------|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-6 | 10YR 4/2 | 95 | 10YR 5/8 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 6-12 | 10YR 5/2 | 95 | 10YR 5/8 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | | ² Location: PL=Pore Lining, M=Matrix. | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | | Indicators for Problematic Hydric Soils³: | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input checked="" type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | |
| Remarks: Iron maganese masses in 6-12 layer. Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 30- RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S34 T20N R3E
 Landform (hillside, terrace, etc.): forested area Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.335991° Long: -90.740193° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Site does not meet all three criteria and is not a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 30- RCM

| | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|---------------------|-------------------------------|---------------------|--|
| Tree Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u>Carya ovata</u> | 80 | Yes | FACU | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B) Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 2. <u>Quercus phellos</u> | 30 | Yes | FACW | |
| 3. <u>Diospyros virginiana</u> | 2 | No | FAC | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 112 =Total Cover | | | | |
| 50% of total cover: <u>56</u> | | 20% of total cover: <u>23</u> | | |
| Sapling/Shrub Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u>Carya ovata</u> | 30 | Yes | FACU | Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 30 =Total Cover | | | | |
| 50% of total cover: <u>15</u> | | 20% of total cover: <u>6</u> | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. _____ | | | | ¹ 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| _____ =Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| _____ =Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 30- RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|---|---|---|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 10YR 4/2 | 95 | 10YR 5/6 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 2-14 | 10YR 5/2 | 92 | 10YR 5/6 | 8 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input checked="" type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Remarks: Iron maganese masses in 2-14" layer. Site meets hydric soil criteria. | | | | | | | | |

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 31 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S26 T20N R3E
 Landform (hillside, terrace, etc.): fallow field Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.339517° Long: -90.734373° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Site meets all three criteria and is in a wetland. | |

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 31 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | 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 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. |
| 1. <u>Panicum sp.*</u> | <u>50</u> | <u>Yes</u> | <u>FAC</u> | |
| 2. <u>Carex sp.*</u> | <u>40</u> | <u>Yes</u> | <u>FACW</u> | |
| 3. <u>Festuca sp.*</u> | <u>5</u> | <u>No</u> | <u>FACU</u> | |
| 4. <u>Carex sp. 2*</u> | <u>5</u> | <u>No</u> | <u>FACW</u> | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 31 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|--|---|-------------------|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-6 | 10YR 4/1 | 95 | 10YR 5/6 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 6-14 | 10YR 5/1 | 95 | 10YR 5/6 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | | ² Location: PL=Pore Lining, M=Matrix. | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | | Indicators for Problematic Hydric Soils³: | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | |
| Remarks: Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 32 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S27 T20N R3E
 Landform (hillside, terrace, etc.): fallow field Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.339563° Long: -90.734144° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Site does not meet all three criteria and is not in a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 32 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | 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 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. |
| 1. <u>Festuca sp.*</u> | 80 | Yes | FACU | |
| 2. <u>Poa pratensis</u> | 15 | No | FACU | |
| 3. <u>Carex sp.*</u> | 5 | No | FACW | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 32 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|---|---|--|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 1-2 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | |
| 2-8 | 10YR 4/2 | 90 | 10YR 5/8 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 8-10 | 10YR 5/1 | 95 | 10YR 5/8 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input checked="" type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Remarks: 5% iron maganese masses in 2-8" layer. Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 33 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S26 T20N R3E
 Landform (hillside, terrace, etc.): farmed wetland Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR or MLRA): LRR O Lat: 36.340411° Long: -90.732047° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Site documented as a farmed wetland. Climatic conditions were considered drier than normal. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 33 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | 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 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. |
| 1. <u>Rumex crispus</u> | <u>5</u> | <u>Yes</u> | <u>FAC</u> | |
| 2. <u>Rudbeckia hirta</u> | <u>5</u> | <u>Yes</u> | <u>FACU</u> | |
| 3. <u>Echinochloa crus-galli</u> | <u>5</u> | <u>Yes</u> | <u>FACW</u> | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 50% of total cover: <u>8</u> | | 20% of total cover: <u>3</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 Site significantly disturbed by farming, meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 33 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|--|----|---|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-6 | 10YR 4/2 | 98 | 10YR 5/6 | 2 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 6-12 | 10YR 4/1 | 95 | 10YR 5/6 | 10 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 12-14 | 10YR 5/3 | 90 | 10YR 5/6 | 10 | C | PL | Loamy/Clayey | Distinct redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | |
| Remarks: Site meets hydric soil criteria. | | | | | | | | |

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 34 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S24 T20N R3E
 Landform (hillside, terrace, etc.): farmed wetland Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.353589° Long: -90.709918° Datum: WGS 84
 Soil Map Unit Name: Dundee silt loam, 0 to 1 percent slopes NWI classification: n/a
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes No X
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u> | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> |
| Remarks: Climatic conditions were considered drier than normal. Vegetation significantly disturbed by farming. Hydrology significantly altered by nearby drainage canals. Aerial imagery shows frequent saturation and on-site investigations yielded hydric soils. Based on best available data, the area is a farmed wetland. | |

HYDROLOGY

| | |
|---|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe) | Wetland Hydrology Present? Yes <u>X</u> No <u> </u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 34 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | |
|---|------------------|-------------------|------------------|--|-------------------|--------------|----------------------|----------------|------------------------|-----------------|----------------------|----------------|-----------------------|----------------|-----------------------|------------------|-------------------------------|----------------|--------------------------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B) | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>90</u></td> <td>x 5 = <u>450</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>470</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.70</u></td> </tr> </table> | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>10</u> | x 2 = <u>20</u> | FAC species <u>0</u> | x 3 = <u>0</u> | FACU species <u>0</u> | x 4 = <u>0</u> | UPL species <u>90</u> | x 5 = <u>450</u> | Column Totals: <u>100</u> (A) | <u>470</u> (B) | Prevalence Index = B/A = <u>4.70</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FACW species <u>10</u> | x 2 = <u>20</u> | | | | | | | | | | | | | | | | | | | |
| FAC species <u>0</u> | x 3 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FACU species <u>0</u> | x 4 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| UPL species <u>90</u> | x 5 = <u>450</u> | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>100</u> (A) | <u>470</u> (B) | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>4.70</u> | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: _____ 20% of total cover: _____ | | | | | | | | | | | | | | | | | | | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: _____ 20% of total cover: _____ | | | | | | | | | | | | | | | | | | | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | ¹ 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. | | | | | | | | | | | | | | | | |
| 1. <u>Zea mays</u> | <u>90</u> | <u>Yes</u> | <u>UPL</u> | | | | | | | | | | | | | | | | | |
| 2. <u>Carex sp.*</u> | <u>10</u> | <u>No</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 9. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 10. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 11. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 12. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>50</u> 20% of total cover: <u>20</u> | | | | | | | | | | | | | | | | | | | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: _____ 20% of total cover: _____ | | | | | | | | | | | | | | | | | | | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 34 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|--|---|---|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | |
| 4-12 | 10YR 4/2 | 95 | 10YR 5/8 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 12-14 | 10YR 4/3 | 90 | 10YR 5/8 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | |
| Remarks: 12-14" layer has 5% depleted 10YR 6/1 in pore lining. Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 35 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S34 T21N R4E
 Landform (hillside, terrace, etc.): fallow field Local relief (concave, convex, none): concave Slope (%): 1%
 Subregion (LRR or MLRA): LRR O Lat: 36.411925° Long: -90.634832° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Site does not meet all three criteria and is not in a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 35 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>25</u> x 3 = <u>75</u> FACU species <u>80</u> x 4 = <u>320</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>105</u> (A) <u>395</u> (B) Prevalence Index = B/A = <u>3.76</u> |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | |
| 1. <u>Bromus arvensis</u> | <u>35</u> | <u>Yes</u> | <u>FACU</u> | |
| 2. <u>Rudbeckia hirta</u> | <u>25</u> | <u>Yes</u> | <u>FACU</u> | |
| 3. <u>Rumex crispus</u> | <u>25</u> | <u>Yes</u> | <u>FAC</u> | |
| 4. <u>Sorghum halepense</u> | <u>10</u> | <u>No</u> | <u>FACU</u> | |
| 5. <u>Erigeron canadensis</u> | <u>5</u> | <u>No</u> | <u>FACU</u> | |
| 6. <u>Solanum carolinense</u> | <u>5</u> | <u>No</u> | <u>FACU</u> | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 12. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>53</u> | | 20% of total cover: <u>21</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:
Tree – Woody plants, excluding vines, 3 in. (7.6 cm) 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 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 _____ No X

Remarks: (If observed, list morphological adaptations below.)
 Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 35 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|--|----|---|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 10YR 3/2 | 95 | 10YR 5/6 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 4-12 | 10YR 4/2 | 90 | 10YR 5/6 | 10 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 12-14 | 10YR 4/2 | 80 | 10YR 5/6 | 10 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Remarks: 12-14" layer contains 10% depleted 10YR 6/1 in the matrix. Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 36 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S34 T21N R4E
 Landform (hillside, terrace, etc.): fallow field Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR or MLRA): LRR O Lat: 36.412296° Long: -90.635366° Datum: WGS 84
 Soil Map Unit Name: Jackport silty clay, 0 to 1 percent slopes NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Site does not meet all three wetland criteria and is not a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 36 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25.0%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | 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 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. |
| 1. <u>Rumex crispus</u> | <u>50</u> | <u>Yes</u> | <u>FAC</u> | |
| 2. <u>Lolium perenne</u> | <u>25</u> | <u>Yes</u> | <u>FACU</u> | |
| 3. <u>Rudbeckia hirta</u> | <u>20</u> | <u>Yes</u> | <u>FACU</u> | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 50% of total cover: <u>48</u> | | 20% of total cover: <u>19</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: <u>30'</u>) | | | | |
| 1. <u>Ipomoea sp.*</u> | <u>10</u> | <u>Yes</u> | <u>FACU</u> | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>5</u> | | 20% of total cover: <u>2</u> | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site does not meet hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 36 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|---|---|---|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-6 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | |
| 6-12 | 10YR 4/2 | 90 | 10YR 5/8 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 12-14 | 10YR 6/1 | 95 | 10YR 5/6 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input checked="" type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Remarks: Maganese masses located in 6-12" layer. Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 37 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S27 T21N R4E
 Landform (hillside, terrace, etc.): forested area Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.428219° Long: -90.631391° Datum: WGS 84
 Soil Map Unit Name: Crowley silt loam NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Site meets all three criteria and is in a wetland. | |

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|---|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 37 - RCM

| | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| Tree Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u>Fraxinus pennsylvanica</u> | 75 | Yes | FACW | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 2. <u>Quercus stellata</u> | 20 | No | UPL | |
| 3. <u>Carya ovalis</u> | 10 | No | FACU | |
| 4. <u>Ostrya virginiana</u> | 10 | No | FACU | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| | 115 | =Total Cover | | |
| 50% of total cover: <u>58</u> | | 20% of total cover: <u>23</u> | | |
| Sapling/Shrub Stratum (Plot size: <u>30'</u>) | | | | |
| 1. <u>Celtis laevigata</u> | 20 | Yes | FACW | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 2. <u>Crataegus marshallii</u> | 20 | Yes | FAC | |
| 3. <u>Crataegus sp.*</u> | 5 | No | FAC | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| | 45 | =Total Cover | | |
| 50% of total cover: <u>23</u> | | 20% of total cover: <u>9</u> | | |
| Herb Stratum (Plot size: _____) | | | | |
| 1. _____ | | | | ¹ 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 vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height. |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| | | =Total Cover | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| Woody Vine Stratum (Plot size: _____) | | | | |
| 1. _____ | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| | | =Total Cover | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 37 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|---|---|---|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-1 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | |
| 1-10 | 10YR 4/2 | 98 | 10YR 5/6 | 2 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 10-14 | 10YR 5/2 | 90 | 10YR 5/8 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input checked="" type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | |
| Remarks: 5% iron magnese masses 10-14". Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | <i>OMB Control #: 0710-0024, Exp: 11/30/2024</i> <i>Requirement Control Symbol EXEMPT:</i> <i>(Authority: AR 335-15, paragraph 5-2a)</i> |
|--|--|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 38 - RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S27 T21N R4E
 Landform (hillside, terrace, etc.): field edge Local relief (concave, convex, none): convex Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.428078° Long: -90.631335° Datum: WGS 84
 Soil Map Unit Name: Crowley silt loam NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Site does not meet all three criteria and is not in a wetland. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|--|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site does not meet wetland hydrology criteria.

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

Sampling Point: DP 38 - RCM

| <u>Tree Stratum</u> (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B) |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) | | | | Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |
| <u>Herb Stratum</u> (Plot size: <u>30'</u>) | | | | 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 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. |
| 1. <u>Bromus arvensis</u> | 30 | Yes | FACU | |
| 2. <u>Digitaria ciliaris</u> | 30 | Yes | FACU | |
| 3. <u>Rumex crispus</u> | 20 | Yes | FAC | |
| 4. <u>Lepidium sp.*</u> | 10 | No | FACU | |
| 5. <u>Festuca sp.*</u> | 5 | No | FACU | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| 95 = Total Cover | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
| 50% of total cover: <u>48</u> | | 20% of total cover: <u>19</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: _____) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: _____ | | 20% of total cover: _____ | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 38 - RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|--|---|-------------------|--|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-6 | 10YR 4/1 | 98 | 10YR 5/6 | 2 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 6-12 | 10YR 4/2 | 95 | 10YR 5/6 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | | ² Location: PL=Pore Lining, M=Matrix. | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | | Indicators for Problematic Hydric Soils³: | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | |
| Remarks: Site meets hydric soil criteria. | | | | | | | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

| | |
|--|---|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|---|

Project/Site: Highway 67 EIS City/County: Corning/Clay Sampling Date: 7/20/2022
 Applicant/Owner: Arkansas Department of Transportation (ARDOT) State: AR Sampling Point: DP 39- RCM
 Investigator(s): Ryan Mountain Section, Township, Range: S24 T21N R4E
 Landform (hillside, terrace, etc.): wood line Local relief (concave, convex, none): concave Slope (%): >1%
 Subregion (LRR or MLRA): LRR O Lat: 36.444307° Long: -90.590287° Datum: WGS 84
 Soil Map Unit Name: Crowley silt loam NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Climatic conditions were considered drier than normal. Site meets all three criteria and is in a wetland. Upland point not achievable due to adjacent irrigated rice field. | |

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U) |
|---|--|

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Site meets wetland hydrology criteria.

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

Sampling Point: DP 39- RCM

| <u>Tree Stratum</u> (Plot size: <u>20' linear</u>) | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------------------|------------------|--|
| 1. <u>Fraxinus pennsylvanica</u> | 50 | Yes | FACW | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>71.4%</u> (A/B) |
| 2. <u>Quercus phellos</u> | 25 | Yes | FACW | |
| 3. <u>Celtis laevigata</u> | 10 | No | FACW | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 85 =Total Cover | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ |
| 50% of total cover: <u>43</u> | | 20% of total cover: <u>17</u> | | |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>20' linear</u>) | | | | Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) |
| 1. <u>Celtis laevigata</u> | 10 | Yes | FACW | |
| 2. <u>Ulmus alata</u> | 10 | Yes | FACU | |
| 3. <u>Ulmus rubra</u> | 5 | No | FAC | |
| 4. <u>Acer rubrum</u> | 5 | No | FAC | |
| 5. <u>Quercus phellos</u> | 5 | No | FACW | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 35 =Total Cover | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 50% of total cover: <u>18</u> | | 20% of total cover: <u>7</u> | | |
| <u>Herb Stratum</u> (Plot size: <u>20' linear</u>) | | | | 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 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. |
| 1. <u>Cyperus sp.*</u> | 25 | Yes | FACW | |
| 2. _____ | | | | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 6. _____ | | | | |
| 7. _____ | | | | |
| 8. _____ | | | | |
| 9. _____ | | | | |
| 10. _____ | | | | |
| 11. _____ | | | | |
| 12. _____ | | | | |
| 25 =Total Cover | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| 50% of total cover: <u>13</u> | | 20% of total cover: <u>5</u> | | |
| <u>Woody Vine Stratum</u> (Plot size: <u>20' linear</u>) | | | | |
| 1. <u>Lonicera japonica</u> | 20 | Yes | FACU | |
| 2. <u>Toxicodendron radicans</u> | 10 | Yes | FAC | |
| 3. _____ | | | | |
| 4. _____ | | | | |
| 5. _____ | | | | |
| 30 =Total Cover | | | | |
| 50% of total cover: <u>15</u> | | 20% of total cover: <u>6</u> | | |

Remarks: (If observed, list morphological adaptations below.)
 *See table at end of Appendix. Site meets hydrophytic vegetation criteria.

SOIL

Sampling Point: DP 39- RCM

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|----|--|----|--|---|--------------|--------------------------------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 1-12 | 10YR 4/2 | 90 | 10YR 5/6 | 10 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 12-14 | 10YR 5/1 | 90 | 10YR 5/6 | 10 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. | | | | | ² Location: PL=Pore Lining, M=Matrix. | | | |
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | | | | Indicators for Problematic Hydric Soils³: | | | |
| <input type="checkbox"/> Histosol (A1) | | | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | | | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) | | |
| <input type="checkbox"/> Histic Epipedon (A2) | | | <input type="checkbox"/> Barrier Islands 1 cm Muck (S12) | | | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) | | |
| <input type="checkbox"/> Black Histic (A3) | | | (MLRA 153B, 153D) | | | <input type="checkbox"/> Coast Prairie Redox (A16) | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | | | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | | | (outside MLRA 150A) | | |
| <input type="checkbox"/> Stratified Layers (A5) | | | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | | | <input type="checkbox"/> Reduced Vertic (F18) | | |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | | | <input checked="" type="checkbox"/> Depleted Matrix (F3) | | | (outside MLRA 150A, 150B) | | |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | | | <input type="checkbox"/> Redox Dark Surface (F6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T) | | |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | | | <input type="checkbox"/> Depleted Dark Surface (F7) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | | | <input type="checkbox"/> Redox Depressions (F8) | | | (MLRA 153B) | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | | | <input type="checkbox"/> Marl (F10) (LRR U) | | | <input type="checkbox"/> Red Parent Material (F21) | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | | | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | | | (outside MLRA 138, 152A in FL, 154) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | | | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | | | <input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | | | (MLRA 153B, 153D) | | |
| <input type="checkbox"/> Sandy Redox (S5) | | | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | | | <input type="checkbox"/> Other (Explain in Remarks) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | | | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | | <input type="checkbox"/> Anomalous Bright Floodplain Soils (F20) | | | | | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) | | | (MLRA 149A, 153C, 153D) | | | | | |
| (LRR S, T, U) | | | <input type="checkbox"/> Very Shallow Dark Surface (F22) | | | | | |
| | | | (MLRA 138, 152A in FL, 154) | | | | | |
| Restrictive Layer (if observed): | | | | | | | | |
| Type: _____ | | | | | | | | |
| Depth (inches): _____ | | | | | | | | |
| | | | | | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Remarks: 0-1" humus. Site meets hydric soil criteria. | | | | | | | | |

| Genus | # Of Species Listed in 2020 | | # Of Species in Each Indicator Status | | | | | | | Dominant Indicator |
|---------------|---|--|---------------------------------------|------|-----|------|-----|-----------------|------|--------------------|
| | USACE Plants List for AGCP Region in AR | | OBL | FACW | FAC | FACU | UPL | % FAC or Wetter | | |
| Allium | 3 | | 0 | 0 | 0 | 3 | 0 | 0 | 0% | FACU |
| Carex | 92 | | 31 | 38 | 12 | 10 | 1 | | 88% | FACW |
| Crataegus | 9 | | 2 | 1 | 5 | 0 | 0 | | 100% | FAC |
| Cyperus | 30 | | 6 | 14 | 7 | 3 | 0 | | 90% | FACW |
| Festuca | 3 | | 0 | 0 | 1 | 2 | 0 | | 33% | FACU |
| Ipomea | 8 | | 0 | 1 | 2 | 4 | 1 | | 38% | FACU |
| Ligustrum | 5 | | 0 | 0 | 4 | 0 | 1 | | 80% | FAC |
| Panicum | 7 | | 1 | 2 | 4 | 0 | 0 | | 100% | FAC |
| Paspalum | 13 | | 4 | 5 | 3 | 1 | 0 | | 92% | FACW |
| Persicaria | 14 | | 7 | 4 | 3 | 0 | 0 | | 100% | OBL |
| Rhynchospora | 17 | | 17 | 0 | 0 | 0 | 0 | | 100% | OBL |
| Smilax | 9 | | 1 | 1 | 5 | 1 | 1 | | 78% | FAC |
| Symphotrichum | 12 | | 2 | 4 | 4 | 0 | 2 | | 83% | FACW |
| Vitis | 7 | | 0 | 2 | 3 | 1 | 1 | | 83% | FAC |



APPENDIX E

Aquatic Resources Tables

Table 1. Other Jurisdictional Waters

Table 2. Wetlands and Open Waters

Table 1. Other Jurisdictional Waters

| Other Waters (OW) Identification No. | Stream Name | Latitude | Longitude | Stream Classification | Impacts Length (LF) | OHWM (width x depth) (feet) | Acres | Appendix B Page # |
|--------------------------------------|-------------------------|-----------|------------|-----------------------|---------------------|-----------------------------|-------|-------------------|
| 20W42 | | 36.070046 | -90.932933 | INT | 102 | 18 x 0.75 | 0.04 | 1 |
| 20W44 | | 36.080726 | -90.926326 | INT | 445 | 12 x 1.25 | 0.12 | 1 |
| 20W5 | | 36.087491 | -90.921580 | INT | 494 | 6 x 0.75 | 0.07 | 1 |
| 20W7 | | 36.087612 | -90.921231 | INT | 354 | 5 x 0.5 | 0.04 | 1 |
| 20W8 | | 36.087890 | -90.921821 | INT | 204 | 6 x 0.25 | 0.03 | 1 |
| 20W15 | Fly Ditch | 36.101306 | -90.905571 | PER | 1,413 | 25 x 0.75 | 0.81 | 2 |
| 20W20 | | 36.104316 | -90.906231 | INT | 486 | 6.5 x 0.75 | 0.07 | 2 |
| 20W24 | | 36.113063 | -90.906240 | INT | 370 | 11 x 1.25 | 0.09 | 3 |
| 20W25 | | 36.114930 | -90.905527 | INT | 1,255 | 5 x 1 | 0.14 | 3 |
| 20W26 | Village Creek | 36.123366 | -90.906066 | PER | 893 | 27 x 4 | 0.55 | 3 |
| 20W27 | | 36.131453 | -90.905925 | INT | 399 | 7 x 1 | 0.06 | 3 |
| 20W29 | | 36.138948 | -90.905901 | INT | 391 | 4 x 0.3 | 0.04 | 4 |
| 20W37 | Big Running Water Creek | 36.184432 | -90.918163 | INT | 487 | 40 x 3 | 0.45 | 6 |
| 20W39 | Cypress Overcup Lateral | 36.204375 | -90.918251 | INT | 661 | 25 x 2 | 0.38 | 6 |
| 20W42 | | 36.216081 | -90.911307 | EPH | 565 | 5 x 0.3 | 0.06 | 7 |
| 20W46 | | 36.237686 | -90.903891 | INT | 1,479 | 8 x 1 | 0.27 | 8 |
| 20W47 | | 36.237839 | -90.903896 | INT | 1,475 | 12 x 1.5 | 0.41 | 8 |
| 20W48 | Black River | 36.248354 | -90.902956 | PER | 412 | 170 x 12 | 1.61 | 8 |
| 20W50 | | 36.261154 | -90.890699 | INT | 713 | 8 x 2 | 0.13 | 9 |
| 20W53 | | 36.267084 | -90.881334 | INT | 631 | 8 x 1 | 0.12 | 9 |
| 20W54 | | 36.268326 | -90.879335 | INT | 514 | 10 x 1 | 0.12 | 9,10 |
| 20W56 | | 36.273866 | -90.870407 | INT | 470 | 6 x 2 | 0.06 | 10 |
| 20W57 | | 36.274781 | -90.869032 | INT | 631 | 8 x 2 | 0.12 | 10 |
| 20W59 | | 36.279652 | -90.861258 | INT | 505 | 10 x 1 | 0.12 | 10 |
| 20W60 | | 36.285778 | -90.852362 | PER | 126 | 15 x 3 | 0.04 | 11 |
| 20W61 | | 36.285683 | -90.852212 | INT | 120 | 10 x 1.5 | 0.03 | 11 |
| 20W62 | | 36.290130 | -90.839652 | INT | 463 | 10 x 1 | 0.11 | 11 |
| 20W63 | | 36.292289 | -90.839669 | INT | 496 | 6 x 1.5 | 0.07 | 11 |
| 20W64 | | 36.296841 | -90.829312 | INT | 167 | 8 x 0.5 | 0.03 | 12 |

| | |
|---------------|--------|
| Total Impacts | 37,377 |
| Acres | 10 |

*Other Waters are not sequential due to removal of non-jurisdictional features from original delineation.

| Other Waters (OW) Identification No. | Stream Name | Latitude | Longitude | Stream Classification | Impacts (LF) | OHWM (width x depth) (feet) | Acres | Appendix B Page # |
|--------------------------------------|--------------------|------------|------------|-----------------------|--------------|-----------------------------|-------|-------------------|
| 20W70 | | 36.309189 | -90.808755 | INT | 581 | 10 x 1.75 | 0.13 | 12 |
| 20W74 | | 36.321498 | -90.777729 | INT | 405 | 6 x 1.5 | 0.06 | 14 |
| 20W75 | | 36.321580 | -90.787400 | INT | 401 | 3 x 0.25 | 0.03 | 13 |
| 20W79 | | 36.328307 | -90.755404 | INT | 705 | 3 x 0.5 | 0.05 | 14 |
| 20W83 | | 36.336023 | -90.739530 | EPH | 602 | 7 x 0.5 | 0.10 | 15 |
| 20W84 | | 36.338895 | -90.734604 | INT | 499 | 10 x 2 | 0.11 | 15 |
| 20W90 | | 36.356764 | -90.704132 | PER | 588 | 12 x 0.75 | 0.16 | 16,17 |
| 20W91 | | 36.357126 | -90.704331 | INT | 183 | 4 x 0.5 | 0.02 | 16,17 |
| 20W97 | | 36.375402 | -90.677992 | INT | 507 | 12 x 1.5 | 0.14 | 18 |
| 20W98 | | 36.383703 | -90.658524 | INT | 499 | 6 x 0.3 | 0.07 | 18 |
| 20W99 | | 36.389201 | -90.649242 | INT | 517 | 8 x 0.75 | 0.09 | 19 |
| 20W100 | | 36.389752 | -90.638610 | INT | 578 | 4 x 0.75 | 0.05 | 19 |
| 20W101 | | 36.396489 | -90.638610 | INT | 319 | 5 x 1 | 0.04 | 19 |
| 20W103 | | 36.400093 | -90.638206 | INT | 398 | 4 x 0.5 | 0.04 | 19,20 |
| 20W105 | Oak Creek Ditch | 36.410757 | -90.637990 | INT | 790 | 12 x 0.8 | 0.22 | 20 |
| 20W108 | | 36.413882 | -90.634333 | INT | 1,473 | 5.5 x 0.75 | 0.19 | 20 |
| 20W110 | | 36.420448 | -90.635936 | INT | 2,281 | 3 x 0.5 | 0.16 | 20,21 |
| 20W111 | Oak Creek Ditch | 36.431259 | -90.622051 | INT | 431 | 12 x 2 | 0.12 | 21 |
| 20W113 | | 36.440519 | -90.595456 | INT | 603 | 5 x 0.8 | 0.07 | 22 |
| 20W114 | | 36.441006 | -90.594793 | INT | 381 | 6 x 1 | 0.05 | 22 |
| 20W115 | | 36.444929 | -90.589735 | INT | 231 | 8 x 0.75 | 0.04 | 22,23 |
| 20W117 | | 36.4446057 | -90.589336 | INT | 512 | 12 x 0.5 | 0.14 | 22 |
| 20W119 | | 36.444974 | -90.590117 | INT | 774 | 14 x 1 | 0.25 | 22,23 |
| 20W125 | | 36.449816 | -90.581068 | INT | 1,200 | 8.5 x 0.75 | 0.23 | 23 |
| COW5 | Lateral Number One | 36.476959 | -90.53838 | INT | 2,515 | 15 x 1 | 0.87 | 25 |
| COW9 | Meark Ditch | 36.49639 | -90.53363 | INT | 1,512 | 12 x 2.5 | 0.42 | 25 |
| COW9.5 | | 36.498562 | -90.53437 | INT | 703 | 5 x 2.5 | 0.19 | 25 |
| COW11 | | 36.498536 | -90.532573 | INT | 468 | 10 x 2 | 0.11 | 25 |

Table 2. Wetlands and Open Waters

| Wetland (W) Identification No. | Latitude | Longitude | Cowardin Classification | Impacts (Acres) | Wetland Data Point | Appendix B Page # |
|--------------------------------|-----------|------------|-------------------------|-----------------|--------------------|-------------------|
| 2W000.5 | 36.069065 | -90.934797 | PEM | 0.22 | DP1-JC | 1 |
| 2W001 | 36.070407 | -90.932731 | PEM | 0.90 | DP3, DP7-JC | 1 |
| 2W001.5 | 36.072030 | -90.931602 | PEM | 0.03 | DP4-JC | 1 |
| 2W002 | 36.072557 | -90.931272 | PEM | 0.63 | DP5-JC | 1 |
| 2W003 | 36.102839 | -90.908346 | PFO | 2.76 | DP2-RCM | 2 |
| 2W004 | 36.185710 | -90.918114 | PEM | 0.29 | DP2-RCM | 6 |
| 2W004.5 | 36.206710 | -90.918020 | PFO | 0.26 | DP6-RCM | 6 |
| 2W005 | 36.207691 | -90.917649 | PEM | 0.76 | DP7-RCM | 6.7 |
| 2W008 | 36.240647 | -90.903864 | PFO | 4.72 | DP11-RCM | 8 |
| 2W008.5 | 36.239564 | -90.905693 | PEM | 0.94 | DP12-RCM | 8 |
| 2W009 | 36.247448 | -90.903128 | PFO | 4.73 | DP14-RCM | 8 |
| 2W009.5 | 36.267113 | -90.881411 | PFO | 0.18 | DP15-RCM | 9.10 |
| 2W010 | 36.285875 | -90.851446 | PFO | 5.36 | DP18-RCM | 11 |
| 2W011 | 36.285875 | -90.850926 | PEM | 0.77 | DP17-RCM | 11 |
| 2W012 | 36.286808 | -90.850642 | PEM | 0.08 | DP17-RCM | 11 |
| 2W013 | 36.290177 | -90.839505 | PFO | 1.84 | DP20-RCM | 11 |
| 2W013.5 | 36.290566 | -90.839562 | PSS | 0.40 | DP20-RCM | 11 |
| 2W014 | 36.293277 | -90.834533 | PFO | 0.99 | DP22-RCM | 11 |
| 2W015 | 36.321685 | -90.782138 | PFO | 3.77 | DP17-JC | 13.14 |
| 2W016 | 36.321560 | -90.777696 | PEM | 0.40 | DP24-RCM | 14 |
| 2W016.5 | 36.330508 | -90.749986 | PFO | 0.24 | DP27-RCM | 15 |
| 2W017 | 36.336298 | -90.738829 | PFO | 3.21 | DP29-RCM | 15 |
| 2W017.5 | 36.336749 | -90.739061 | PSS | 0.32 | OB | 15 |
| 2W017.8 | 36.339160 | -90.734370 | PEM | 0.35 | DP31-RCM | 15 |
| 2W018 | 36.356587 | -90.704518 | PFO | 1.11 | DP18-JC | 16 |
| 2W019 | 36.356792 | -90.703759 | PFO | 0.39 | DP20-JC | 16.17 |
| 2W021 | 36.428224 | -90.631386 | PFO | 0.06 | DP37-RCM | 21 |
| 2W021.3 | 36.445067 | -90.590154 | PFO | 0.87 | DP39-RCM | 22.23 |
| 2W021.5 | 36.445254 | -90.590037 | PEM | 0.17 | DP39-RCM | 22.23 |
| 2W022 | 36.448669 | -90.584712 | PUB | 0.25 | | 23 |
| 2W021 | 36.087738 | -90.922168 | FW | 0.02 | | 1 |
| 2W002 | 36.090547 | -90.918899 | FW | 0.07 | | 2 |
| 2W003 | 36.095143 | -90.909702 | FW | 0.69 | | 2 |
| 2W004 | 36.097996 | -90.907587 | FW | 3.51 | | 2 |
| 2W005 | 36.109458 | -90.906309 | FW | 11.97 | | 2.3 |
| 2W006 | 36.126895 | -90.906123 | FW | 2.50 | | 3 |
| 2W007 | 36.151927 | -90.905727 | FW | 9.72 | | 4 |
| 2W008 | 36.155363 | -90.908804 | FW | 7.28 | | 4 |
| 2W009 | 36.159804 | -90.909742 | FW | 1.99 | | 4.5 |
| 2W010 | 36.168519 | -90.916699 | FW | 8.81 | | 5 |
| 2W011 | 36.173012 | -90.917033 | FW | 1.37 | DP10-JC | 5 |
| 2W011.5 | 36.192496 | -90.918697 | FW | 5.36 | | 6 |
| 2W013 | 36.199842 | -90.919008 | FW | 0.90 | | 6 |
| 2W014 | 36.209819 | -90.917411 | FW | 3.68 | | 7 |
| 2W015 | 36.212897 | -90.914745 | FW | 0.68 | | 7 |
| 2W016 | 36.217364 | -90.909256 | FW | 2.77 | | 7 |
| 2W017 | 36.226992 | -90.904097 | FW | 16.08 | | 7.8 |
| 2W018 | 36.243283 | -90.904014 | FW | 5.19 | | 8 |
| 2W019 | 36.252448 | -90.901222 | FW | 24.18 | | 8.9 |
| 2W020 | 36.258649 | -90.891269 | FW | 45.87 | | 9 |
| 2W021 | 36.267878 | -90.880721 | FW | 5.19 | | 9.10 |
| 2W022 | 36.270734 | -90.875037 | FW | 26.94 | | 10 |
| 2W024 | 36.277282 | -90.865583 | FW | 22.57 | | 10 |
| 2W025 | 36.284064 | -90.853140 | FW | 0.13 | | 11 |

| Wetland (W) Identification No. | Latitude | Longitude | Cowardin Classification | Impacts (Acres) | Wetland Data Point | Appendix B Page # |
|--------------------------------|-----------|------------|-------------------------|-----------------|--------------------|-------------------|
| 2FW026 | 36.287097 | -90.850155 | FW | 0.15 | | 11 |
| 2FW027 | 36.287548 | -90.847514 | FW | 10.95 | | 11 |
| 2FW028 | 36.289136 | -90.842031 | FW | 2.97 | | 11 |
| 2FW029 | 36.291543 | -90.837166 | FW | 10.54 | | 11 |
| 2FW030 | 36.295093 | -90.831428 | FW | 14.03 | | 11.12 |
| 2FW031 | 36.297655 | -90.827788 | FW | 2.65 | | 12 |
| 2FW032 | 36.298843 | -90.825587 | FW | 4.36 | | 12 |
| 2FW033 | 36.299663 | -90.824226 | FW | 6.29 | | 12 |
| 2FW034 | 36.302699 | -90.818960 | FW | 0.89 | | 12 |
| 2FW035 | 36.304836 | -90.816288 | FW | 6.95 | | 12 |
| 2FW036 | 36.307080 | -90.812895 | FW | 13.45 | DP12-JC | 12 |
| 2FW037 | 36.309445 | -90.809160 | FW | 1.51 | | 12 |
| 2FW038 | 36.309811 | -90.807910 | FW | 0.25 | | 12.13 |
| 2FW039 | 36.313294 | -90.803545 | FW | 10.20 | DP14-JC | 13 |
| 2FW040 | 36.315897 | -90.809160 | FW | 10.49 | | 13 |
| 2FW041 | 36.320271 | -90.793596 | FW | 3.45 | | 13 |
| 2FW042 | 36.321252 | -90.788793 | FW | 16.86 | | 13 |
| 2FW043 | 36.321715 | -90.784032 | FW | 3.21 | | 13 |
| 2FW045 | 36.322398 | -90.771652 | FW | 9.76 | DP26-RCM | 14 |
| 2FW046 | 36.323906 | -90.767107 | FW | 2.55 | | 14 |
| 2FW047 | 36.330296 | -90.751634 | FW | 1.19 | | 15 |
| 2FW048 | 36.334085 | -90.742155 | FW | 1.24 | | 15 |
| 2FW049 | 36.339940 | -90.732888 | FW | 1.71 | | 15 |
| 2FW050 | 36.341583 | -90.730151 | FW | 11.18 | DP33-RCM | 15.16 |
| 2FW051 | 36.351617 | -90.713639 | FW | 56.64 | DP34-RCM | 16 |
| 2FW052 | 36.360287 | -90.697353 | FW | 1.42 | | 17 |
| 2FW053 | 36.365090 | -90.689960 | FW | 5.97 | | 17 |
| 2FW054 | 36.366922 | -90.687003 | FW | 2.52 | | 17 |
| 2FW055 | 36.367272 | -90.686109 | FW | 0.67 | | 17 |
| 2FW056 | 36.367811 | -90.684615 | FW | 0.88 | | 17 |
| 2FW057 | 36.374863 | -90.673530 | FW | 31.77 | DP22-JC | 18 |
| 2FW058 | 36.386305 | -90.654212 | FW | 14.89 | | 18 |
| 2FW059 | 36.388247 | -90.650874 | FW | 2.67 | | 19 |
| 2FW060 | 36.390637 | -90.646960 | FW | 7.40 | | 19 |
| 2FW061 | 36.400897 | -90.636202 | FW | 0.25 | | 19.20 |
| 2FW062 | 36.407233 | -90.636004 | FW | 27.14 | DP24-JC | 19.20 |
| 2FW063 | 36.413289 | -90.633990 | FW | 4.89 | | 20 |
| 2FW064 | 36.421242 | -90.635116 | FW | 7.51 | | 20.21 |
| 2FW065 | 36.431551 | -90.621217 | FW | 2.76 | | 21 |
| 2FW066 | 36.434002 | -90.614732 | FW | 5.10 | | 21.22 |
| 2FW067 | 36.435848 | -90.607088 | FW | 6.30 | | 22 |
| 2FW068 | 36.442074 | -90.593038 | FW | 16.08 | | 22 |
| 2FW069 | 36.443691 | -90.589765 | FW | 0.21 | | 22 |
| 2FW070 | 36.448724 | -90.582497 | FW | 15.24 | DP26-JC | 23 |
| 2FW071 | 36.456553 | -90.573560 | FW | 7.87 | | 23 |
| 2FW072 | 36.468676 | -90.555379 | FW | 0.44 | | 24 |
| CW001 | 36.470504 | -90.553040 | PFO | 1.02 | DP28-JC | 24 |
| CW002 | 36.471454 | -90.536802 | PFO | 1.05 | DP30-JC | 25 |
| CFW001 | 36.471454 | -90.552291 | FW | 3.74 | | 24 |
| CFW002 | 36.491874 | -90.535013 | FW | 0.55 | | 25 |
| CFW003 | 36.466511 | -90.534734 | FW | 3.36 | | 25 |
| CFW004 | 36.489580 | -90.534550 | FW | 8.94 | | 25 |
| CFW005 | 36.484393 | -90.534431 | FW | 0.92 | | 25 |
| CFW006 | 36.495632 | -90.533723 | FW | 3.00 | | 25 |
| CFW007 | 36.496311 | -90.533004 | FW | 4.49 | | 25 |

| Total Impacts (ac) | |
|--------------------|--------|
| Farmed Wetlands | 624.06 |
| Wetlands | 39.07 |
| Total | 663.13 |

*Wetlands are not sequential due to removal of non-jurisdictional features from original delineation.



APPENDIX F

Weather Data

- Appendix F1: NOAA Climatological Observations – Corning, AR
- Appendix F2: NOAA Climatological Observations – Evening Shade, AR
- Appendix F3: Antecedent Precipitation Tool

Appendix F1

U.S. Department of Commerce
 National Oceanic & Atmospheric Administration
 National Environmental Satellite, Data, and Information Service
 Current Location: Elev: 300 ft. Lat: 36.4197° N Lon: -90.5858° W
 Station: **CORNING, AR US USC00031632**

Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.
 Generated on 08/15/2022

National Centers for Environmental Information
 151 Patton Avenue
 Asheville, North Carolina 28801

Observation Time Temperature: 0800 Observation Time Precipitation: 0800

| Year | Month | Day | Temperature (F) | | Precipitation | | | Evaporation | | | 4 in. Depth | | 8 in. Depth | | |
|------|-------|---------|------------------------------------|------|--|---------|--------------|----------------------------|----------------------|----------------------|-------------|------|----------------------|------|------|
| | | | 24 Hrs. Ending at Observation Time | | 24 Hour Amounts Ending at Observation Time | | At Obs. Time | 24 Hour Wind Movement (mi) | Amount of Evap. (in) | Ground Cover (see *) | Max. | Min. | Ground Cover (see *) | Max. | Min. |
| | | | Max. | Min. | Rain, Melted Snow, Etc. (in) | F I a g | | | | | | | | | |
| 2022 | 07 | 01 | | 85 | | | | | | | | | | | |
| 2022 | 07 | 02 | 97 | 74 | | | | | | | | | | | |
| 2022 | 07 | 03 | 93 | 76 | | | | | | | | | | | |
| 2022 | 07 | 04 | 98 | 76 | | | | | | | | | | | |
| 2022 | 07 | 05 | 102 | 78 | | | | | | | | | | | |
| 2022 | 07 | 06 | 104 | 78 | | | | | | | | | | | |
| 2022 | 07 | 07 | 103 | 79 | | | | | | | | | | | |
| 2022 | 07 | 08 | 100 | 81 | | | | | | | | | | | |
| 2022 | 07 | 09 | 94 | 79 | | | | | | | | | | | |
| 2022 | 07 | 10 | 89 | 70 | | | | | | | | | | | |
| 2022 | 07 | 11 | 96 | 68 | | | | | | | | | | | |
| 2022 | 07 | 12 | 90 | 74 | | | | | | | | | | | |
| 2022 | 07 | 13 | 91 | 71 | | | | | | | | | | | |
| 2022 | 07 | 14 | 94 | 69 | | | | | | | | | | | |
| 2022 | 07 | 15 | 99 | 68 | | | | | | | | | | | |
| 2022 | 07 | 16 | 103 | 73 | | | | | | | | | | | |
| 2022 | 07 | 17 | 92 | 76 | | | | | | | | | | | |
| 2022 | 07 | 18 | 85 | 70 | | | | | | | | | | | |
| 2022 | 07 | 19 | 92 | 72 | | | | | | | | | | | |
| 2022 | 07 | 20 | 98 | 78 | | | | | | | | | | | |
| 2022 | 07 | 21 | 93 | 72 | | | | | | | | | | | |
| 2022 | 07 | 22 | 98 | 72 | | | | | | | | | | | |
| 2022 | 07 | 23 | 98 | 74 | | | | | | | | | | | |
| 2022 | 07 | 24 | 100 | 76 | | | | | | | | | | | |
| 2022 | 07 | 25 | 92 | 78 | | | | | | | | | | | |
| 2022 | 07 | 26 | 100 | 77 | | | | | | | | | | | |
| 2022 | 07 | 27 | 98 | 78 | | | | | | | | | | | |
| 2022 | 07 | 28 | 87 | 71 | | | | | | | | | | | |
| 2022 | 07 | 29 | 82 | 71 | | | | | | | | | | | |
| 2022 | 07 | 30 | 79 | 65 | | | | | | | | | | | |
| 2022 | 07 | 31 | 82 | 69 | | | | | | | | | | | |
| | | Summary | 94 | 74 | | | | | | | | | | | |
| | | | | | | | | | | | | | | 0.0 | |

Empty, or blank, cells indicate that a data observation was not reported.

*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 0=Unknown
 "s" This data value failed one of NCDC's quality control tests. "At Obs." = Temperature at time of observation

"T" values in the Precipitation or Snow category above indicate a "trace" value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.
 Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

Appendix F2

U.S. Department of Commerce
 National Oceanic & Atmospheric Administration
 National Environmental Satellite, Data, and Information Service
 Current Location: Elev: 539 ft. Lat: 36.0373° N Lon: -91.5954° W
 Station: **EVENING SHADE 2.7 SSE, AR US1ARSH0003**

Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.

Generated on 08/15/2022

National Centers for Environmental Information
 151 Patton Avenue
 Asheville, North Carolina 28801

Observation Time Temperature: Unknown Observation Time Precipitation: Unknown

| Year | Month | Day | Temperature (F) | | Precipitation | | | Evaporation | | | 4 in. Depth | | 8 in. Depth | | | | | | |
|---------|-------|-----|------------------------------------|---------|------------------------------|-----|------------------------------|-------------|--------------|----------------------------|----------------------|----------------------|-------------|------|----------------------|------|------|--|--|
| | | | 24 Hrs. Ending at Observation Time | At Obs. | Rain, Melted Snow, Etc. (in) | F | Snow, Ice Pellets, Hail (in) | Flag | At Obs. Time | 24 Hour Wind Movement (mi) | Amount of Evap. (in) | Ground Cover (see *) | Max. | Min. | Ground Cover (see *) | Max. | Min. | | |
| | | | Max. | Min. | | | | | | | | | | | | | | | |
| 2022 | 07 | 01 | | | 0.00 | 0.0 | | | | | | | | | | | | | |
| 2022 | 07 | 02 | | | 0.16 | | | | | | | | | | | | | | |
| 2022 | 07 | 03 | | | 0.00 | 0.0 | | | | | | | | | | | | | |
| 2022 | 07 | 04 | | | 0.00 | 0.0 | | | | | | | | | | | | | |
| 2022 | 07 | 05 | | | 0.02 | | | | | | | | | | | | | | |
| 2022 | 07 | 06 | | | 0.00 | 0.0 | | | | | | | | | | | | | |
| 2022 | 07 | 07 | | | 0.00 | 0.0 | | | | | | | | | | | | | |
| 2022 | 07 | 08 | | | 0.00 | 0.0 | | | | | | | | | | | | | |
| 2022 | 07 | 09 | | | 0.00 | 0.0 | | | | | | | | | | | | | |
| 2022 | 07 | 10 | | | 0.00 | 0.0 | | | | | | | | | | | | | |
| 2022 | 07 | 11 | | | 0.00 | 0.0 | | | | | | | | | | | | | |
| 2022 | 07 | 12 | | | 0.00 | 0.0 | | | | | | | | | | | | | |
| 2022 | 07 | 13 | | | 0.00 | 0.0 | | | | | | | | | | | | | |
| 2022 | 07 | 14 | | | 0.00 | 0.0 | | | | | | | | | | | | | |
| 2022 | 07 | 15 | | | 0.00 | 0.0 | | | | | | | | | | | | | |
| 2022 | 07 | 16 | | | 0.00 | 0.0 | | | | | | | | | | | | | |
| 2022 | 07 | 17 | | | 0.01 | | | | | | | | | | | | | | |
| 2022 | 07 | 18 | | | 1.20 | | | | | | | | | | | | | | |
| 2022 | 07 | 19 | | | 0.04 | | | | | | | | | | | | | | |
| 2022 | 07 | 20 | | | 0.00 | 0.0 | | | | | | | | | | | | | |
| 2022 | 07 | 21 | | | | | | | | | | | | | | | | | |
| 2022 | 07 | 22 | | | | | | | | | | | | | | | | | |
| 2022 | 07 | 23 | | | | | | | | | | | | | | | | | |
| 2022 | 07 | 24 | | | | | | | | | | | | | | | | | |
| 2022 | 07 | 25 | | | | | | | | | | | | | | | | | |
| 2022 | 07 | 26 | | | | | | | | | | | | | | | | | |
| 2022 | 07 | 27 | | | | | | | | | | | | | | | | | |
| 2022 | 07 | 28 | | | | | | | | | | | | | | | | | |
| 2022 | 07 | 29 | | | | | | | | | | | | | | | | | |
| 2022 | 07 | 30 | | | | | | | | | | | | | | | | | |
| 2022 | 07 | 31 | | | | | | | | | | | | | | | | | |
| Summary | | | | | | | | | | | 1.43 | 0.0 | | | | | | | |

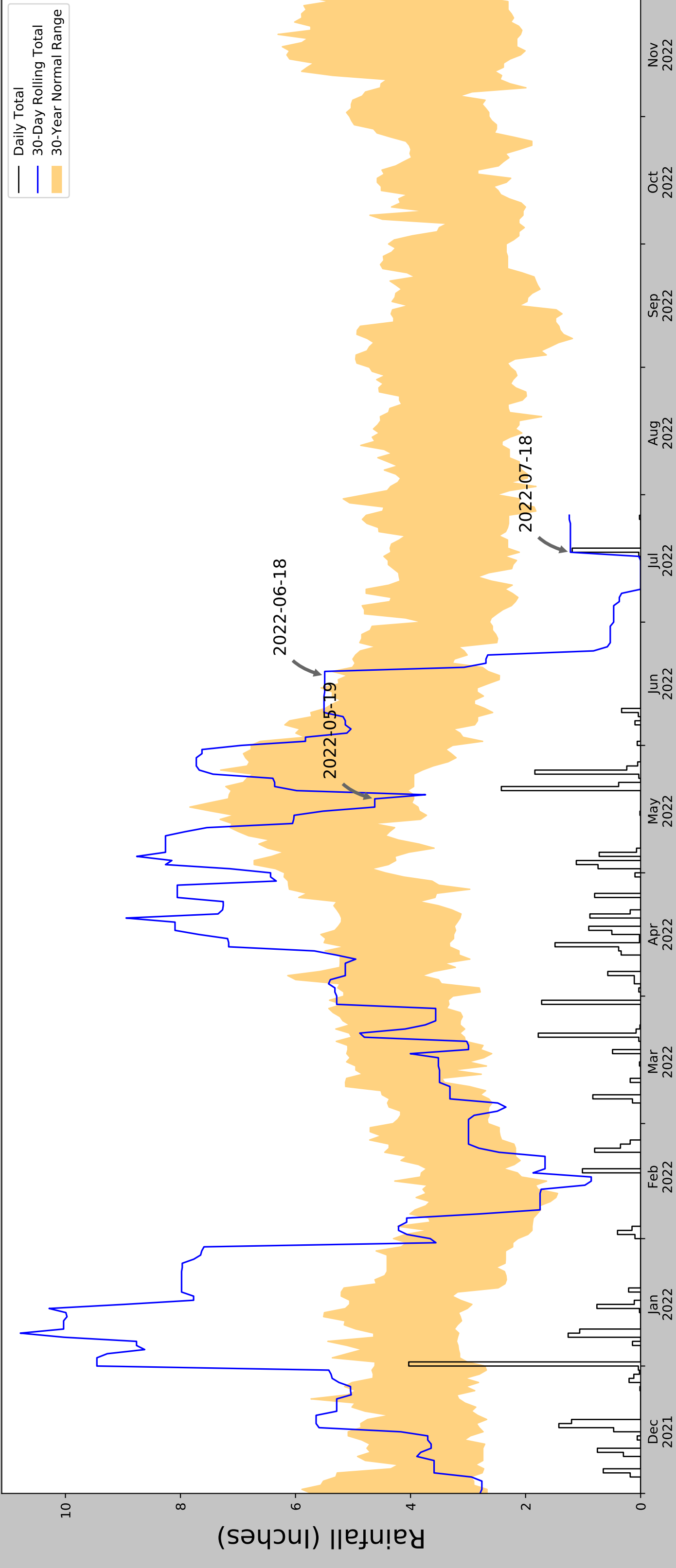
Empty, or blank, cells indicate that a data observation was not reported.

*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 0=Unknown
 "s" This data value failed one of NCEC's quality control tests. "At Obs." = Temperature at time of observation

"T" values in the Precipitation or Snow category above indicate a "trace" value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.
 Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



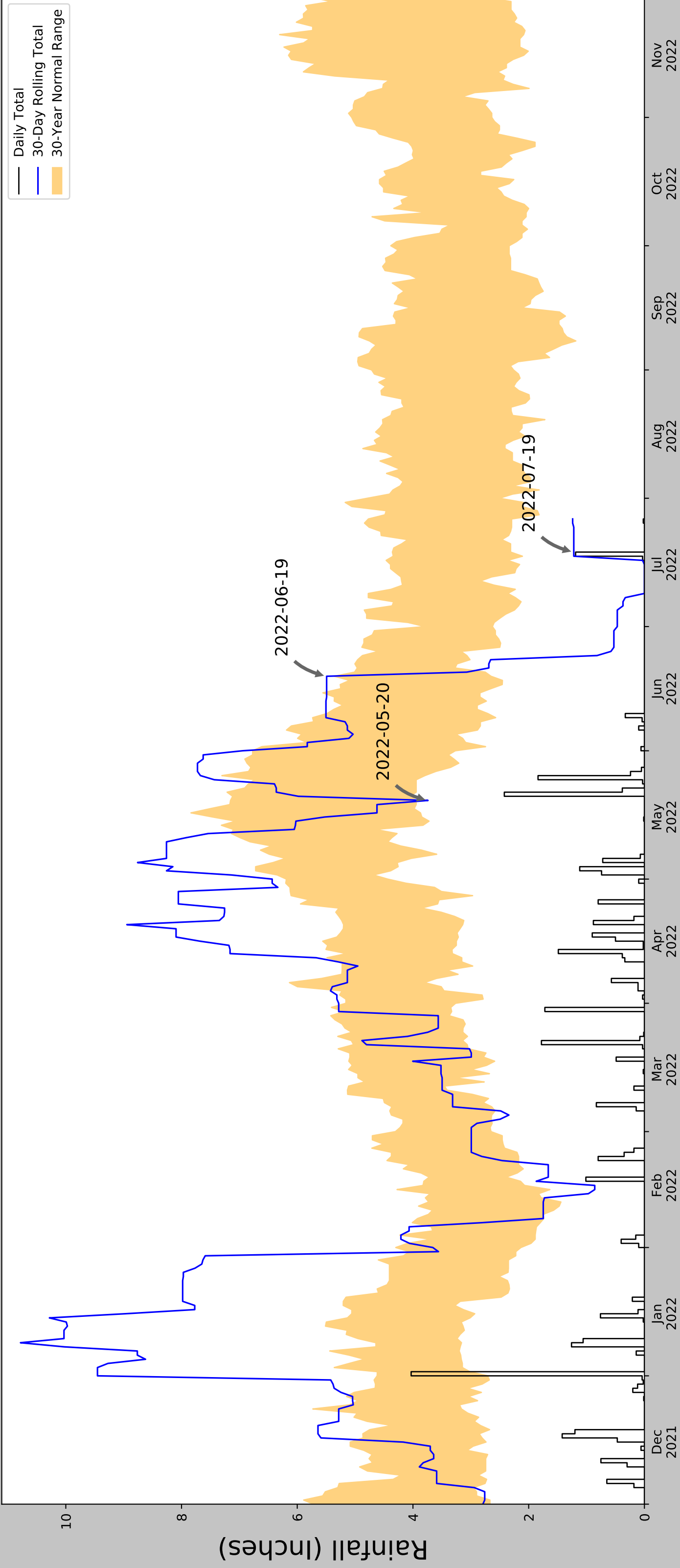
| | |
|----------------------------------|-----------------------------|
| Coordinates | 36.321338, -90.776862 |
| Observation Date | 2022-07-18 |
| Elevation (ft) | 287.46 |
| Drought Index (PDSI) | Incipient wetness (2022-06) |
| WebWIMP H ₂ O Balance | Dry Season |

| 30 Days Ending | 30 th %ile (in) | 70 th %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|----------------|----------------------------|----------------------------|---------------|-------------------|-----------------|--------------|-------------------------------|
| 2022-07-18 | 2.10748 | 4.339764 | 1.220472 | Dry | 1 | 3 | 3 |
| 2022-06-18 | 2.453543 | 5.093307 | 5.492126 | Wet | 3 | 2 | 6 |
| 2022-05-19 | 3.944488 | 7.164567 | 4.622047 | Normal | 2 | 1 | 2 |
| Result | | | | | | | Normal Conditions - 11 |

Figure and tables made by the
Antecedent Precipitation Tool
 Version 1.0
 Written by Jason Deters
 U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days Normal | Days Antecedent |
|----------------------|-------------------|----------------|---------------|-------------|------------|-------------|-----------------|
| CORNING | 36.4197, -90.5858 | 299.869 | 12.616 | 12.409 | 5.834 | 10862 | 77 |
| CORNING 2.1 W | 36.4116, -90.6234 | 288.058 | 2.164 | 11.811 | 0.999 | 20 | 0 |
| NEELYVILLE 7E | 36.5539, -90.3944 | 298.885 | 14.108 | 0.984 | 6.362 | 61 | 0 |
| LAFE 1.8 W | 36.2086, -90.5347 | 336.942 | 14.86 | 37.073 | 7.238 | 41 | 13 |
| DONIPHAN | 36.6206, -90.8125 | 289.042 | 18.739 | 10.827 | 8.635 | 368 | 0 |
| POCAHONTAS 1 | 36.2642, -90.9683 | 314.961 | 23.845 | 15.092 | 11.09 | 1 | 0 |

Antecedent Precipitation vs Normal Range based on NOAA's Daily Historical Climatology Network



| | |
|----------------------------------|-----------------------------|
| Coordinates | 36.321338, -90.776862 |
| Observation Date | 2022-07-19 |
| Elevation (ft) | 287.46 |
| Drought Index (PDSI) | Incipient wetness (2022-06) |
| WebWIMP H ₂ O Balance | Dry Season |

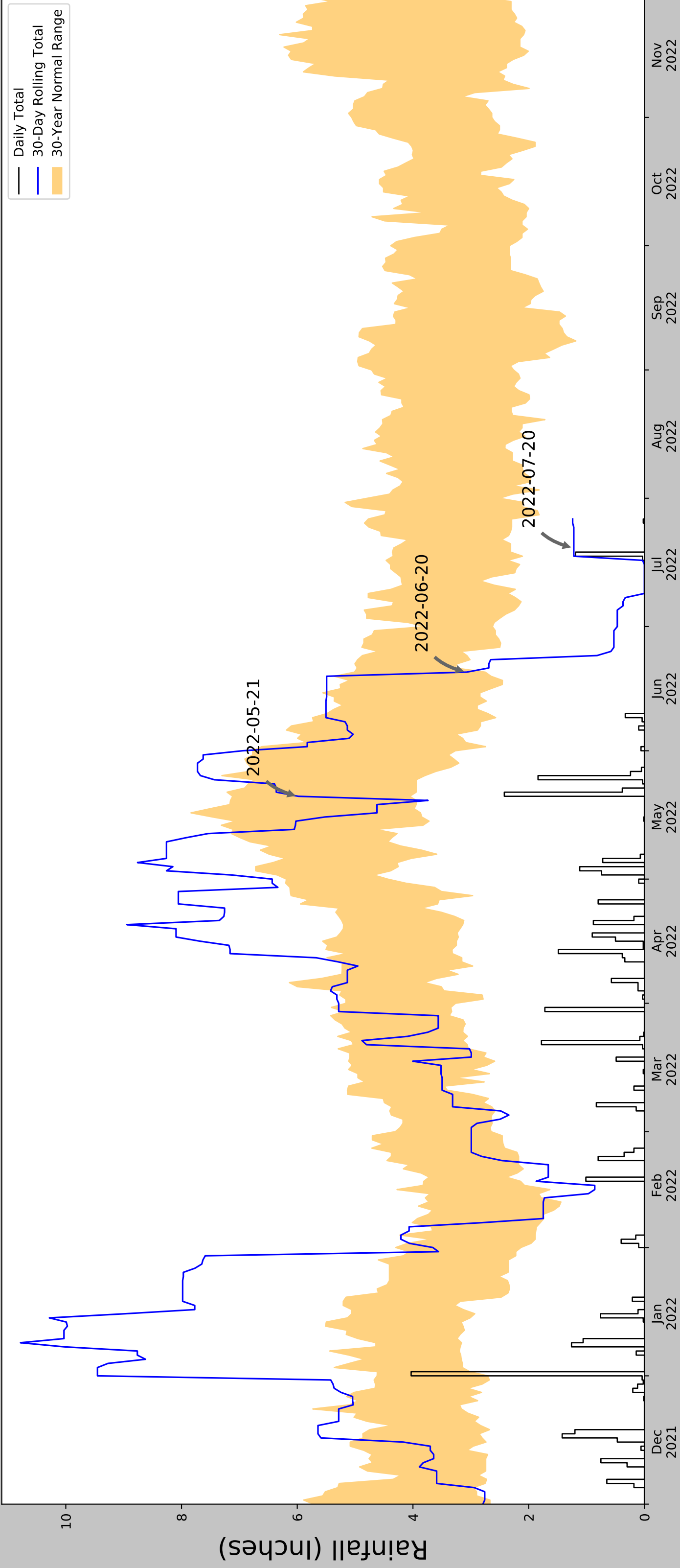
| 30 Days Ending | 30 th %ile (in) | 70 th %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|----------------|----------------------------|----------------------------|---------------|-------------------|-----------------|--------------|-------------------------------|
| 2022-07-19 | 2.312598 | 4.355512 | 1.220472 | Dry | 1 | 3 | 3 |
| 2022-06-19 | 2.651575 | 5.359843 | 5.492126 | Wet | 3 | 2 | 6 |
| 2022-05-20 | 3.944488 | 7.15315 | 3.740158 | Dry | 1 | 1 | 1 |
| Result | | | | | | | Normal Conditions - 10 |



Figure and tables made by the
Antecedent Precipitation Tool
 Version 1.0
 Written by Jason Deters
 U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days Normal | Days Antecedent |
|----------------------|-------------------|----------------|---------------|-------------|------------|-------------|-----------------|
| CORNING | 36.4197, -90.5858 | 299.869 | 12.616 | 12.409 | 5.834 | 10862 | 77 |
| CORNING 2.1 W | 36.4116, -90.6234 | 288.058 | 2.164 | 11.811 | 0.999 | 20 | 0 |
| NEELYVILLE 7E | 36.5539, -90.3944 | 298.885 | 14.108 | 0.984 | 6.362 | 61 | 0 |
| LAFE 1.8 W | 36.2086, -90.5347 | 336.942 | 14.86 | 37.073 | 7.238 | 41 | 13 |
| DONIPHAN | 36.6206, -90.8125 | 289.042 | 18.739 | 10.827 | 8.635 | 368 | 0 |
| POCAHONTAS 1 | 36.2642, -90.9683 | 314.961 | 23.845 | 15.092 | 11.09 | 1 | 0 |

Antecedent Precipitation vs Normal Range based on NOAA's Daily Historical Climatology Network



| | |
|----------------------------------|-----------------------------|
| Coordinates | 36.321338, -90.776862 |
| Observation Date | 2022-07-20 |
| Elevation (ft) | 287.46 |
| Drought Index (PDSI) | Incipient wetness (2022-06) |
| WebWIMP H ₂ O Balance | Dry Season |

| 30 Days Ending | 30 th %ile (in) | 70 th %ile (in) | Observed (in) | Wetness Condition | Condition Value | Month Weight | Product |
|----------------|----------------------------|----------------------------|---------------|-------------------|-----------------|--------------|-----------------------|
| 2022-07-20 | 2.312598 | 4.331496 | 1.220472 | Dry | 1 | 3 | 3 |
| 2022-06-20 | 2.750787 | 5.009055 | 3.070866 | Normal | 2 | 2 | 4 |
| 2022-05-21 | 4.055906 | 7.114961 | 5.980315 | Normal | 2 | 1 | 2 |
| Result | | | | | | | Drier than Normal - 9 |



Figure and tables made by the
Antecedent Precipitation Tool
 Version 1.0
 Written by Jason Deters
 U.S. Army Corps of Engineers

| Weather Station Name | Coordinates | Elevation (ft) | Distance (mi) | Elevation Δ | Weighted Δ | Days Normal | Days Antecedent |
|----------------------|-------------------|----------------|---------------|-------------|------------|-------------|-----------------|
| CORNING | 36.4197, -90.5858 | 299.869 | 12.616 | 12.409 | 5.834 | 10862 | 77 |
| CORNING 2.1 W | 36.4116, -90.6234 | 288.058 | 2.164 | 11.811 | 0.999 | 20 | 0 |
| NEELYVILLE 7E | 36.5539, -90.3944 | 298.885 | 14.108 | 0.984 | 6.362 | 61 | 0 |
| LAFE 1.8 W | 36.2086, -90.5347 | 336.942 | 14.86 | 37.073 | 7.238 | 41 | 13 |
| DONIPHAN | 36.6206, -90.8125 | 289.042 | 18.739 | 10.827 | 8.635 | 368 | 0 |
| POCAHONTAS 1 | 36.2642, -90.9683 | 314.961 | 23.845 | 15.092 | 11.09 | 1 | 0 |

