

ECS Southwest, LLP

Wetland Delineation

REDI Arkansas Manufacturing Center Miller County Road 64 and US Highway 67 Texarkana, Arkansas 71854

For: AR-TX REDI 2900 Saint Michael Drive 5th Floor Texarkana, Texas 75503

ECS Project No. 51:2106-A (Rev. 1)

April 2, 2021 (Revised November 9, 2021)





Geotechnical • Construction Materials • Environmental • Facilities April 2, 2021 (Revised November 9, 2021)

Mr. Rob Sitterley AR-TX REDI 2900 Saint Michael Drive 5th Floor Texarkana, Texas 75503

ECS Project No. 51:2106-A (Rev. 1)

Reference: Wetland Delineation – Arkansas Manufacturing Center – Miller County Road 64 and US Highway 67, Texarkana, Miller County, Arkansas 71854

Dear Mr. Sitterley:

ECS Southwest, LLP (ECS) is pleased to submit this report of the Wetland Delineation services for the above-referenced site. ECS' services were provided in general accordance with ECS Proposal No. 51:2133 authorized on February 2, 2021 and generally meet the requirements of the 1987 U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual, and the Regional Supplement to the USACE Wetland Delineation Manual: Atlantic and Gulf Coastal Plain, Version 2.0 date March 2010. *Based on our wetland delineation, it is ECS's opinion that potentially jurisdictional Waters of the U.S. (WOUS) are present on the Project site.* However, final authority in determining jurisdiction of features, including significant nexus decisions, rests with the U.S. Army Corps of Engineers.

Upon your request, we will contact the USACE to schedule a field meeting to conduct a Waters of the U.S. (WOUS) boundary confirmation and jurisdictional determination. This process takes anywhere from a few weeks to six (6) months, depending on the availability of USACE personnel. After the boundaries of the waters of the U.S. have been confirmed by the USACE, we suggest that the areas be surveyed for future planning purposes and be submitted to the USACE as a final record. If any potential impacts are proposed, we can assist you with permitting options and support to complete the process.

ECS would like to thank AR-TX REDI for the opportunity to provide you with this Wetland Delineation. We look forward to assisting you further with this project and other environmental concerns you may have. If you have any questions, please feel free to contact us at any time at 512-837-8005.

Sincerely,

ECS SOUTHWEST, LLP

Roger S. Willis II, M.S. Environmental Project Manager

Craig W. Hiatt, M.S. Director of Environmental Services

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April 2, 2021 (Revised November 9, 2021)

U.S. Army Corps of Engineers Regulatory Division (CESWL-RD) Little Rock District 700 W Capitol Avenue Little Rock, AR 72203-3221

ECS Project No. 51:2106-A (Rev. 1)

Reference: Wetland Delineation – Arkansas Manufacturing Center – Miller County Road 64 and US Highway 67, Texarkana, Miller County, Arkansas 71854

1.0 INTRODUCTION

The purpose of this Wetland Delineation is to review a site associated with a manufacturing center northeast of Texarkana (Homan Township) in Miller County, Arkansas, hereafter referred to as the Project, for jurisdictional Waters of the U.S (WOUS) within the Project study area.

Wetlands are defined by the United States Army Corps of Engineers (USACE) and the United States Environmental Protection Agency (EPA) as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions." In order for an area to be classified as wetland, hydrophytic vegetation, hydric soils, and wetland hydrology indicators must be present.

2.0 **PROPERTY DESCRIPTION**

The Client is proposing to develop five (5) parcels of land totaling approximately 1,410 acres that are currently used for cattle grazing.

A map of the Project is included as Appendix A, Figure 1.

3.0 METHODOLOGY

This Wetland Delineation is based on ECS' professional judgment and application of the technical criteria presented in the 1987 USACE Wetlands Delineation Manual (USACE 1987), and on the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Version 2.0 dated November 2010 (USACE 2010).

ECS completed the following tasks to identify and delineate potentially jurisdictional WOUS boundaries onsite:

3.1 Literature Review

ECS wetland scientists reviewed the U.S. Geological Survey (USGS) Topographic Map Fulton, Arkansas and Homan, Arkansas Quadrangles 2019, U.S. Department of Agriculture Natural Resource Conservation Service (USDA-NRCS) Soil Survey of Miller County, the USDA NRCS 2015 National Hydric Soils List for Miller County, the Federal Emergency Management Agency (FEMA) Floodplain Mapping (Panels 05091C0050D and 05091C0075D), U.S. Fish & Wildlife Service (USFWS) National Wetlands Inventory (NWI) Wetlands Mapper, available aerial photographs to identify potentially jurisdictional Waters of the U.S. (i.e., streams, wetlands, natural ponds, lakes), and available watershed information.

3.2 Methodology for Field Investigation

Wetland boundaries were delineated using the routine onsite determination method described in the USACE Manual and Regional Supplement, in conjunction with the Atlantic and Gulf Coastal Plain 2016 Regional Wetland Plant List and the USDA Soil Survey.

ECS performed onsite wetland delineations as described above. First, site hydrology was observed and the plant community within the data plot was characterized. The dominant plant species within each community were then identified, and it was determined whether or not hydrophytic (wetland) plants dominated the plant community. The USFWS has defined five (5) wetland plant indicator categories including:

Obligate wetland (OBL) – has >99% probability of occurring in wetlands Facultative wetland (FACW) – has 66% to 99% chance of occurring in wetlands Facultative (FAC) – has 33% to 66% chance of occurring in wetlands Facultative upland (FACU) – has 1 to 33% chance of occurring in wetlands Upland (UPL) – has <1% chance of occurring in wetlands No Indicator (NI) – no wetland indicator for the specified species, considered UPL Plants identified as OBL, FACW, or FAC are considered wetland plants (or hydrophytes) by USACE.

In areas determined to have hydrophytic vegetation and potential wetland hydrology, an approximately 16-24 inch deep hand auger soil boring or shovel test pit was completed to determine if hydric soils were present. The soil boring was also inspected to determine if indicators of wetland hydrology (inundation, soil saturation, etc.) were present.

Once an area is determined to be a potential wetland, further testing was performed to locate the wetland/upland (non-wetland) boundary. A second soil data point was completed in the upland area to document non-wetland conditions. Potential wetland boundaries were marked with consecutively numbered surveyor's ribbon flags.

Data forms specified in the Regional Supplement were completed for each potential wetland and non-wetland soil data point location. The data forms recorded the vegetation, soils, and hydrology observations used in making the potential wetland determinations.



Pedestrian field reconnaissance was performed by ECS scientists on March 2-4, 2021. At the time of this field reconnaissance, Texas and Arkansas had recently received historically high winter precipitation leading to flooding throughout much of the eastern portion of the Project. As such, ECS conducted a second field reconnaissance on October 20, 2021 to reevaluate data points taken in previously flooded areas and map wetlands obscured or inaccessible in March.

Field investigations compared the reviewed background data to existing conditions and determined the current extent of Waters of the U.S. on the Project. A Trimble Geo 7X was utilized to record all field data. The Trimble Geo 7X is a handheld Global Navigation Satellite System (GNSS) capable of sub-meter accuracy data collection. Waypoints were taken of all data points. Wetland and stream field notes were recorded on the appropriate regional supplement wetland data sheets. Following the field investigation, the GNSS data was imported into Google Earth Pro. The collected waypoint data was used to interpret and develop polygon boundaries for all stream and wetland features.

3.3 Methodology for Delineating Streams

During the field investigation for potential wetlands, ECS identified streams onsite that would be considered jurisdictional by state and federal regulatory agencies. ECS used field indicators such as flow, substrate composition, presence/absence of defined bed and banks, origin of hydrologic source, presence/absence of vegetation in the stream channel, and composition and relative abundance of resident benthic macroinvertebrates to classify onsite streams into three stream types: ephemeral, intermittent, and perennial.

4.0 **PROJECT SUMMARY AND SETTING**

Hydrology, topography, vegetation, and soils within the Project boundaries are detailed below.

4.1 Topography

According to the USGS topographic maps Fulton, AR and Homan, AR Quadrangles, elevation of the Project ranges from approximately 266 feet above mean sea level (msl) on the southwestern corner of the Project, sloping to approximately 257 feet above msl on the southeastern corner. The Project is relatively flat and generally slopes to the southeast. A topographic map of the Project is included as Appendix I, Figure 2.

4.2 Hydrology

One drainage ditch is mapped crossing the western portion of the Project from northwest to southeast on the USGS Topographic map. Two wetlands are mapped on the NWI Wetlands Mapper (USFWS 2021) (Appendix II, Attachment 2). The mapped wetlands consist of a man-made pond on the northern boundary of the project, immediately south of the Interstate 30 overpass above US Highway 67, and a palustrine forested located in the wooded area on the eastern portion of the Project.

The Project is located within the Bois d'Arc Bayou watershed, identified as Hydrologic Unit Codes (HUC) 111402010202 (EPA 2021).

The majority of the Project is located inside of the 100-year floodplain (Zone A) (Appendix II, Attachment 3).



4.3 Vegetation

Vegetation observed during field reconnaissance included cedar elm (*Ulmus crassifolia*), pecan (*Carya illinoinensis*), pin oak (*Quercus palustris*), blackgum (*Nyssa sylvatica*), American hornbeam (*Carpinus caroliniana*), slippery elm (*Ulmus rubra*), American beech (*Fagus grandifolia*), hackberry (*Celtis occidentalis*), honeylocust (*Gleditsia triacanthos*), bermudagrass (*Cynodon dactylon*), Texas fescue (*Festuca versuta*), clammy groundcherry (*Physalis heterophylla*), early buttercup (*Ranunculus fascicularis*), burclover (*Medicago minima*), march purslane (*Ludwigia peploides*), pitchfork crowngrass (*Paspalum bifidum*), curly dock (*Rumex crispus*), southern crabgrass (*Digitaria ciliaris*), poverty rush (*Juncus anthelatus*), curlytop knotweed (*Polygonum lapathifolium*), mild water pepper (*Polygonum hydropiperoides*), smaller duckweed (*Lemna minor*), nut grass (*Cyperus esculentus*), southern cattail (*Typha domingensis*), bushy bluestem (*Andropogon glomeratus*), poison ivy (*Toxicodendron radicans*), and American wisteria (*Wisteria frutescens*)

4.4 Soils

Four (4) soil units (Table 1) are located within the Project boundaries (NRCS 2021). Hydric soils are defined 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. The soil units found on the Project are listed as hydric or include hydric minor components in Miller County (NRCS 2021) (Appendix II, Attachment 1).

Map Unit Symbol	Map Unit Name	Hydric Soil	Data Point
5	Billyhaw clay, 0 to 1 percent slopes, rarely flooded	No (Minor components)	UDP-1, WDP-1, T7DP1\WDP-8, UDP-9, WDP-9
53	Bossier clay, 0 to 1 percent slopes	Yes	DP-1, DP-2, T1DP1, T2DP2/WDP-5, UDP-2, UDP-5, WDP-2, T4DP2/WDP-6, T6DP1, UDP -6, T8DP1/WDP-11, T9DP1/WDP-12, UDP-10, UDP- 11, UDP-12, WDP-10, WDP- A, UDP-A, WDP- B
55	Rilla silt loam, 0 to 1 percent slopes	No (Minor components)	T2DP1, UDP-3, UDP-4, WDP-3, WDP-4, T3DP1, T4DP1, T5DP1, UDP-7, UDP-8
86	Water	N/A	WDP-7

Table 1: Soil Units within the Project Boundaries



4.5 Observations

ECS conducted the initial field reconnaissance on March 2-4, 2021. At the time of this field reconnaissance, Texas and Arkansas had recently received historically high winter precipitation leading to flooding throughout much of the eastern portion of the Project. As such, ECS conducted a second field reconnaissance on October 20, 2021 to reevaluate data points taken in previously flooded areas and map wetlands obscured or inaccessible in March. The Project consisted of approximately 1,410 acres of pasture with the eastern portion of the Project being wooded after decades of disuse.

ECS personnel sampled thirty-five (35) data points on the Project. Data points were taken along nine (9) transects where plant communities varied and in areas identified on aerial imagery has being possible wetlands. Data points that indicated a wetland may be present at the data point were labeled WDP (wetland data point) and a second data point was taken in an upland area (UDP) to delineate the differing communities. Thus some data points are labeled with a transect identifier and indicated as a possible wetland, e.g. T2DP2/WDP-5. In total, ECS identified eight (8) wetlands on the Project. Two data points, labeled as DP, were taken to document current conditions in previously flooded areas.

Data points WDP-1 and UDP-1 were associated with Wetland 1; WDP-1 being located in the western portion of the wetland and UDP-1 being located west of WDP-1 in an area of similar elevation, but with a different plant community.

WDP-1 was characterized by very dark grayish brown clay with dark yellowish brown redox concentrations in the soil matrix which did meet the requirements for a hydric soil. Hydrologic indicators included approximately 5 inches of surface water, an algal mat, inundation visible on aerial imagery, and water-stained leaves. Vegetation at WDP-1 consisted of a cedar elm underlain by pitchfork crowngrass and bermudagrass. Vegetation at WDP-1 met the dominance and prevalence tests for hydrophytic vegetation.

UDP-1 was characterized by brown clay with reddish yellow redox concentrations in the soil matrix which did not meet the requirements for a hydric soil. Hydrologic indicators were not observed within the vicinity of UDP-1. Vegetation at UDP-1 consisted of an herbaceous stratum dominated by burclover and bermudagrass. Vegetation at UDP-1 did not meet tests for hydrophytic vegetation.

Wetland 1 was a palustrine emergent wetland. A single cedar elm shaded most of the wetland. The area around the tree was under approximately 6-8 inches of water and was not vegetated. The margins of the wetland were vegetated with pitchfork crowngrass, early buttercup, and curly dock. Due to high precipitation, the area of inundation exceeded the bounds of the mapped wetland with the ratio of crowngrass to bermudagrass used to delineate the normal bounds. Wetland 1 was located on the western portion of the Project. Connectivity with other features was not observed. The nearest feature was an off-site roadside ditch located approximately 200 feet west. Wetland 1 appeared to be fed by overland flow and slowly dries up due to evaporation between precipitation events. ECS does not consider Wetland 1 to be a potential Water of the US due its lack of connectivity with other features.



Data point T1DP1 was located in a pasture on the western portion of the Project. T1DP1 was characterized by reddish brown sandy clay which did not meet the requirements for a hydric soil. Hydrologic indicators were not observed in the vicinity of T1DP1. Vegetation at T1DP1 consisted of an herbaceous stratum dominated by bermudagrass and Texas fescue. Vegetation around T1DP1 did not meet tests for hydrophytic vegetation.

Data points WDP-2 and UDP-2 were associated with Wetland 2; WDP-2 being located in the northern portion of the wetland near the northern Project boundary and UDP-2 being located west of WDP-2 in an area of higher elevation and a different plant community.

WDP-2 was characterized by brown clay with brownish yellow redox concentrations in the soil matrix which did meet the requirements for a hydric soil. Hydrologic indicators included approximately 3 inches of surface water, drift deposits, and an algal mat. Vegetation at WDP-2 consisted of an overhanging cedar elm. The herbaceous stratum consisted of sparse early buttercup, bermudagrass, and marsh purslane. Vegetation at WDP-2 met the dominance and prevalence tests for hydrophytic vegetation.

UDP-2 was characterized by dark yellowish brown sandy clay soils which did not meet the requirements for a hydric soil. Hydrologic indicators were not observed within the vicinity of UDP-2. Vegetation at UDP-2 consisted of a cedar elm with an herbaceous stratum dominated by bermudagrass. Vegetation at UDP-2 did not meet tests for hydrophytic vegetation.

Wetland 2 was a palustrine emergent wetland in and along a man-made drainage ditch. Marsh purslane and curly dock lined the ditch, which was characterized by a steep drop of two to three feet off of the top of the banks. The wetland appeared to be fed by some overland flow (where banks had been eroded by cattle) and off-site drainage from the railroad tracks along the northern boundary of the Project. The ditch was observed to continue off of the Project to the southeast and joins a network of similar canals and ditches that drain to the Red River. Wetland 2 appears to be a potential Water of the US due to its observed connectivity with the Red River.

Data points WDP-3 and UDP-3 were associated with a suspected wetland; WDP-3 being located in the central portion of the suspected wetland and UDP-3 being located south of WDP-3 in an area of higher elevation and a different plant community. During post-reconnaissance review, WDP-3 was found to not be located in a wetland.

WDP-3 was characterized by brown clayey soils with strong brown redox concentration in the soil matrix which did meet the requirements for a hydric soil. Hydrologic indicators included approximately 2 inches of surface water, an algal mat, inundation visible on aerial imagery, and aquatic fauna. Vegetation at WDP-3 consisted of an herbaceous stratum of bermudagrass and early buttercup. Vegetation at WDP-3 did not meet tests for hydrophytic vegetation.

UDP-3 was characterized by a thin surficial layer of very dark gray clay under lain by brown clay soils which did not meet the requirements for a hydric soil. Hydrologic indicators were not observed within the vicinity of UDP-3. Vegetation at UDP-3 consisted of pecan underlain by an herbaceous stratum dominated by bermudagrass and clammy groundcherry. Vegetation at UDP-3 did not meet tests for hydrophytic vegetation.



Data points WDP-4 and UDP-4 were associated with a suspected wetland; WDP-4 being located in the northwestern portion of the suspected wetland and UDP-4 being located northeast of WDP-4 in an area of higher elevation and a different plant community. During post-reconnaissance review, WDP-4 was found to not be located in a wetland.

WDP-4 was characterized by a surficial layer of brown silty clay soils underlain by reddish brown silty clay which did not meet the requirements for a hydric soil. Hydrologic indicators included approximately 3 inches of surface water, an algal mat, and inundation visible on aerial imagery. Vegetation at WDP-4 consisted of an herbaceous stratum dominated by early buttercup. Vegetation at WDP-4 met the dominance and prevalence tests for hydrophytic vegetation.

UDP-4 was characterized by brown silty clay soils which did not meet the requirements for a hydric soil. Hydrologic indicators were not observed within the vicinity of UDP-4. Vegetation at UDP-4 consisted of pecan underlain by an herbaceous stratum dominated by bermudagrass and burclover. Vegetation at UDP-4 did not meet tests for hydrophytic vegetation.

Data point T2DP1 was located in a pasture near the northern boundary of the Project. T2DP1 was characterized by brown sandy clay soils which did not meet the requirements for a hydric soil. Hydrologic indicators were not observed in the vicinity of T2DP1. Vegetation at T2DP1 consisted of an herbaceous stratum dominated by bermudagrass and Texas fescue. Vegetation around T2DP1 did not meet tests for hydrophytic vegetation.

Data points T2DP2/WDP-5, UDP-5, and DP-1 were associated with Wetland 5, a flooded area mapped in March 2021; T2DP2/WDP-5 being located in the western portion of the flooded area and UDP-5 being located northwest of T2DP2/WDP-5 in an area of similar elevation and a different plant community. Data point DP-1 was located in the eastern portion of the formerly flooded area. ECS revisited T2DP2/WDP-5 and took data point DP-1 in October 2021 under normal circumstances. Based on those observations, Wetland 5 is no longer considered a wetland.

T2DP2/WDP-5 was characterized by very dark gray silty clay soils with reddish yellow redox concentrations in the soil matrix which did meet the requirements for a hydric soil. Hydrologic indicators included approximately 2 inches of surface water, algal mats, and aquatic fauna. Vegetation at T2DP2/WDP-5 consisted of an herbaceous stratum dominated by marsh purslane and pitchfork crowngrass. Vegetation at T2DP2/WDP-5 met the rapid, dominance, and prevalence tests for hydrophytic vegetation. ECS revisited T2DP2/WDP-5 in October 2021. At that time, hydrologic indicators were not observed. Vegetation consisted of an herbaceous stratum dominated by bermudagrass and fescue. Vegetation at T2DP2/WDP-5 did not meet tests for hydrophytic vegetation. Soils were similar to those observed in March 2021. Based on the observations under normal circumstances, ECS does not consider the data point to indicate a wetland.

DP-1 was characterized by gray clayey soils with yellowish-red redox concentrations in the soil matrix which did meet the requirements for a hydric soil. Hydrologic indicators were not observed at DP-1. Vegetation at DP-1 consisted of an herbaceous stratum dominated by bermudagrass with some wild parsley, Kentucky bluegrass, and dagger-leaf spikerush. Vegetation at DP-1 did not meet tests for hydrophytic vegetation.



UDP-5 was characterized by brown sandy clay soils which did not meet the requirements for a hydric soil. Hydrologic indicators were not observed within the vicinity of UDP-5. Vegetation at UDP-5 consisted of an herbaceous stratum dominated by bermudagrass and burclover. Vegetation at UDP-5 did not meet tests for hydrophytic vegetation.

Previously we noted that Wetland 5 was a palustrine emergent wetland located on the southern portion of the Project. However, based on observations taken in October 2021, ECS no longer considers the mapped area of Wetland 5 to be a wetland.

Data point T3DP1 was located in a pasture near the northern Project boundary. T3DP1 was characterized by brown sandy clay loam soils which did not meet the requirements for a hydric soil. Hydrologic indicators were not observed in the vicinity of T3DP1. Vegetation at T3DP1 consisted of an herbaceous stratum dominated by bermudagrass. Vegetation around T3DP1 did not meet tests for hydrophytic vegetation.

Data point T4DP1 was located in a pasture near the northern Project boundary. T4DP1 was characterized by brown sandy clay loam soils which did not meet the requirements for a hydric soil. Hydrologic indicators were not observed in the vicinity of T4DP1. Vegetation at T4DP1 consisted of an herbaceous stratum dominated by bermudagrass. Vegetation around T4DP1 did not meet tests for hydrophytic vegetation.

Data points T4DP2/WDP-6, UDP-6, and DP-2 were associated with Wetland 6, a flooded area mapped in March 2021; T2DP2/WDP-6 being located in the northwestern portion of the flooded area and UDP-6 being located southeast of T2DP2/WDP-6 in an area of higher elevation and a different plant community. Data point DP-2 was located in the southeastern portion of the formerly flooded area. ECS revisited T4DP2/WDP-6 and took data point DP-2 in October 2021 under normal circumstances. Based on those observations, Wetland 6 is no longer considered a wetland.

T4DP2/WDP-6 was characterized by brown silty clay soils with reddish yellow redox concentrations in the soil matrix which did meet the requirements for a hydric soil. Hydrologic indicators included approximately 3 inches of surface water, inundation visible on aerial imagery, and aquatic fauna. Vegetation at T4DP2/WDP-6 consisted of an herbaceous stratum dominated by marsh purslane. Vegetation at T4DP2/WDP-6 met the rapid, dominance, and prevalence tests for hydrophytic vegetation. ECS revisited T4DP2/WDP-6 in October 2021. At that time, hydrologic indicators included inundation on aerial photography. Vegetation consisted of an herbaceous stratum dominated by bermudagrass and balloonvine. Vegetation at T4DP2/WDP-6 did not meet tests for hydrophytic vegetation. Soils were similar to those observed in March 2021. Based on the observations under normal circumstances, ECS does not consider the data point to indicate a wetland.

DP-2 was characterized by black clayey soils with yellowish-red redox concentrations in the soil matrix which did meet the requirements for a hydric soil. Hydrologic indicators were not observed at DP-2. Vegetation at DP-2 consisted of an herbaceous stratum dominated by bermudagrass and wild parsley. Vegetation at DP-2 did not meet tests for hydrophytic vegetation.



UDP-6 was characterized by dark brown silty clay loam soils with reddish yellow redox concentration in the soil matrix and pore linings which did meet the requirements for a hydric soil. Hydrologic indicators were not observed within the vicinity of UDP-6. Vegetation at UDP-6 consisted of an herbaceous stratum dominated by bermudagrass. Vegetation at UDP-6 did not meet tests for hydrophytic vegetation.

Previously we noted that Wetland 6 was a palustrine emergent wetland located on the southeastern portion of the Project. However, based on observations taken in October 2021, ECS no longer considers the mapped area of Wetland 6 to be a wetland.

Data point T5DP1 was located in a pasture near the northern Project boundary. T5DP1 was characterized by brown sandy clay soils which did not meet the requirements for a hydric soil. Hydrologic indicators observed in the vicinity of DP-5 included approximately 2 inches of surface water. Vegetation at T5DP1 was consisted of an herbaceous stratum dominated by bermudagrass and Texas fescue. Vegetation around T5DP1 did not meet tests for hydrophytic vegetation.

Data points WDP-7 and UDP-7 were associated with Wetland 7; WDP-7 being located in the southern portion of the wetland and UDP-7 being located south of WDP-7 in an area of higher elevation and a different plant community.

WDP-7 was characterized by gray silty clay soils with dark yellowish brown redox concentrations in the soil matrix which did meet the requirements for a hydric soil. Hydrologic indicators included approximately 6 inches of surface water, an algal mat, inundation visible on aerial imagery, water-stained leaves, and aquatic fauna. Vegetation at WDP-7 consisted of overhanging cedar elm with an herbaceous stratum dominated by marsh purslane and curlytop knotweed. Vegetation at WDP-7 met the dominance and prevalence tests for hydrophytic vegetation.

UDP-7 was characterized by brown sandy clay soils which did not meet the requirements for a hydric soil. Hydrologic indicators were not observed within the vicinity of UDP-7. Vegetation at UDP-7 consisted of an herbaceous stratum dominated by bermudagrass and Texas fescue. Vegetation at UDP-7 did not meet tests for hydrophytic vegetation.

Wetland 7 was a triangular, excavated pond located on the northern boundary of the Project. The northwestern and northeastern boundaries of the wetland consisted of US Highway 67 and Interstate 30, respectively. Wetland 7 appeared to be fed by overland flow from the north and ditches along the adjoining roads. During periods of high precipitation, Wetland 7 may overtop along its southern edge and overland flow from the wetland would fan out into the pasture. The nearest feature to the wetland is a drainage ditch over 1,600 feet southeast and off of the Project. ECS does not consider Wetland 7 to be a potential Water of the US due its lack of connectivity with other features.

Data point T6DP1 was located in a pasture on the northeastern portion of the Project. T6DP1 was characterized by brown sandy clay loam soils which did not meet the requirements for a hydric soil. Hydrologic indicators were not observed in the vicinity of T6DP1. Vegetation at T6DP1 consisted of an herbaceous stratum dominated by bermudagrass and Texas fescue. Vegetation around T6DP1 did not meet tests for hydrophytic vegetation.



Data points T7DP1/WDP-8 and UDP-8 were associated with a suspected wetland; T7DP1/WDP-8 being located in the central portion of the suspected wetland and UDP-8 being located west of T7DP1/WDP-8 in an area of similar elevation and a different plant community. During post-reconnaissance review, T7DP1/WDP-8 was found to not be located in a wetland.

T7DP1/WDP-8 was characterized by brown clay loam soils which did not meet the requirements for a hydric soil. Hydrologic indicators included approximately 2 inches of surface water and an algal mat. Vegetation at T7DP1/WDP-8 consisted of an herbaceous stratum dominated by bermudagrass and Texas fescue. Vegetation at T7DP1/WDP-8 did not meet tests for hydrophytic vegetation.

UDP-8 was characterized by a brown clay loam with reddish yellow redox concentration in the soil matrix which did not meet the requirements for a hydric soil. Hydrologic indicators were not observed within the vicinity of UDP-8. Vegetation at UDP-8 consisted of an herbaceous stratum dominated by bermudagrass and Texas fescue. Vegetation at UDP-8 did not meet tests for hydrophytic vegetation.

Data points WDP-9 and UDP-9 were associated with Wetland 9; WDP-9 being located in the southern portion of the wetland and UDP-9 being located west of WDP-9 in an area of higher elevation and with a different plant community.

WDP-9 was characterized by gray silty clay with brownish yellow redox concentrations in the soil matrix which did meet the requirements for a hydric soil. Hydrologic indicators included approximately 5 inches of surface water, an algal mat, inundation visible on aerial imagery, and aquatic fauna. Vegetation at WDP-9 consisted of a pin oak underlain by mild water pepper, marsh purslane, smaller duckweed, and poverty rush. Vegetation at WDP-9 met the rapid, dominance, and prevalence tests for hydrophytic vegetation.

UDP-9 was characterized by a brown clay loam which did not meet the requirements for a hydric soil. Hydrologic indicators were not observed within the vicinity of UDP-9. Vegetation at UDP-1 consisted of an herbaceous stratum dominated by bermudagrass and Texas fescue. Vegetation at UDP-9 did not meet tests for hydrophytic vegetation.

Wetland 9 was a palustrine unconsolidated bottom, diked wetland. The wetland was ringed by oaks underlain with obligate wetland plants such as water pepper and marsh purslane. The area around the tree was under approximately 6-8 inches of water and was not vegetated. Wetland 9 was located on the northeastern portion of the Project. Wetland 9 appeared to be fed by overland flow from the north and northeast. During periods of high precipitation, Wetland 9 may overtop along its southeastern edge and overland flow from the wetland would fan out into the pasture. The nearest feature to the wetland is a drainage ditch over 1,500 feet south and off of the Project. ECS does not consider Wetland 9 to be a potential Water of the US due its lack of connectivity with other features.

Data points WDP-10 and UDP-10 were associated with Wetland 10; WDP-10 being located in the eastern portion of the wetland and UDP-10 being located east of WDP-10 in an area of similar elevation, but with a different plant community.



WDP-10 was characterized by dark grayish brown silty clay with strong brown redox concentrations in the soil matrix which did meet the requirements for a hydric soil. Hydrologic indicators included approximately 4 inches of surface water, inundation visible on aerial imagery, and a sparsely vegetated concave surface. Vegetation at WDP-10 consisted of hackberry and honeylocust underlain by early buttercup. Vegetation at WDP-10 net the dominance test for hydrophytic vegetation.

UDP-10 was characterized by a surficial layer of very dark gray sandy clay with reddish yellow redox concentrations in the pore linings underlain by brown sandy clay with reddish yellow redox concentrations in the soil matrix and pore linings which did meet the requirements for a hydric soil. Hydrologic indicators were not observed within the vicinity of UDP-10. Vegetation at UDP-10 consisted of an herbaceous stratum dominated by bermudagrass. Vegetation at UDP-10 did not meet tests for hydrophytic vegetation.

Wetland 10 was a palustrine emergent wetland. The wetland was ringed by hackberry, honeylocust, and pin oak. The margins of the wetland were vegetated with early buttercup and curly dock. Due to high precipitation, the area of inundation exceeded the bounds of the mapped wetland with the ratio of dock and buttercup to bermudagrass and fescue used to delineate the normal bounds. Wetland 10 was located on the eastern portion of the Project. Connectivity with other features was not observed. The nearest feature was an off-site drainage ditch located over 400 feet east. Wetland 10 appeared to be fed by overland flow from the north and west. During periods of high precipitation, Wetland 10 may overtop along its eastern edge and overland flow from the wetland would fan out into the pasture. ECS does not consider Wetland 10 to be a potential Water of the US due its lack of connectivity with other features.

Data points T8DP1/WDP-11, T9DP1/WDP-12, UDP-11, and UDP-12 were associated with Wetland 11, a flooded area mapped in March 2021; T8DP1/WDP-11 being located in the western central portion of the flooded area, T9DP1/WDP-12 being located in the eastern central portion, UDP-11 being located on the unpaved access road north of T8DP1/WDP-11, and UDP-12 being located on the unpaved access road southeast of T9DP1/WDP-12. ECS revisited T8DP1/WDP-11 and T9DP1/WDP-12 in October 2021 under normal circumstances. Based on those observations, Wetland 6 is no longer considered a wetland.

T8DP1/WDP-11 was characterized by a surficial layer of very dark grayish brown clay soils with reddish yellow redox concentrations in the soil matrix underlain by brown clay loam with brownish yellow redox concentrations in the soil matrix which did meet the requirements for a hydric soil. Hydrologic indicators included approximately 4 inches of surface water, aquatic fauna, and moss trim lines. Vegetation at T8DP1/WDP-11 consisted of blackgum and musclewood trees and saplings underlain by an herbaceous stratum dominated by poverty rush and nutgrass. Vegetation. ECS revisited T8DP1/WDP-11 met the dominance and prevalence tests for hydrologic indicators included moss-trim lines. Vegetation consisted of blackgum and musclewood trees and saplings underlain by an herbaceous stratum dominated by poverty rush, hydrologic indicators included moss-trim lines. Vegetation consisted of blackgum and musclewood trees and saplings underlain by an herbaceous stratum dominated by poverty rush, nutgrass, and bermudagrass. Vegetation at T8DP1/WDP-11 met the dominance and prevalence and prevalence tests for hydrophytic vegetation. Soils were similar to those observed in March 2021. Based on the observations under normal circumstances, ECS does not consider the data point to indicate a wetland.



T9DP1/WDP-12 was characterized by a surficial layer of very dark gray clay soils underlain by brown clay soils with brownish yellow redox concentrations in the soil matrix which did meet the requirements for a hydric soil. Hydrologic indicators included approximately 2 inches of surface water, aquatic fauna, and moss trim lines. Vegetation at T9DP1/WDP-12 consisted of slippery elm, American beech, and musclewood trees and saplings underlain an herbaceous stratum dominated by nutgrass, poverty rush, and early buttercup. Vegetation at T9DP1/WDP-12 met the dominance and prevalence tests for hydrophytic vegetation. ECS revisited T9DP1/WDP-12 in October 2021. At that time, hydrologic indicators included moss-trim lines. Vegetation consisted of slippery elm, American beech, and musclewood trees and saplings underlain an herbaceous stratum dominated by nutgrass and poverty rush. Vegetation at T9DP1/WDP-12 met the dominance and prevalence tests for hydrophytic vegetation. ECS revisited T9DP1/WDP-12 in October 2021. At that time, hydrologic indicators included moss-trim lines. Vegetation consisted of slippery elm, American beech, and musclewood trees and saplings underlain an herbaceous stratum dominated by nutgrass and poverty rush. Vegetation at T9DP1/WDP-12 met the dominance and prevalence tests for hydrophytic vegetation. Soils were similar to those observed in March 2021. Based on the observations under normal circumstances, ECS does not consider the data point to indicate a wetland.

UDP-11 was characterized by brown clay soils with brownish yellow redox concentrations in the soil matrix which did not meet the requirements for a hydric soil. Hydrologic indicators were not observed within the vicinity of UDP-11. Vegetation at UDP-11 consisted of musclewood trees and sapling underlain by an herbaceous stratum composed of burclover and bermudagrass. Vegetation at UDP-11 did not meet tests for hydrophytic vegetation.

UDP-12 was characterized by brown sandy clay soils with brownish yellow redox concentrations in the soil matrix which did not meet the requirements for a hydric soil. Hydrologic indicators were not observed within the vicinity of UDP-12. Vegetation at UDP-12 consisted of an herbaceous stratum dominated by bermudagrass and bushy bluestem. Vegetation at UDP-12 did not meet tests for hydrophytic vegetation.

Previously we noted that Wetland 11 was a palustrine forested wetland located on the eastern, wooded portion of the Project. However, based on observations taken in October 2021, ECS no longer considers the mapped area of Wetland 6 to be a wetland.

Data points WDP-A and UDP-A were associated with Wetland A; WDP-A being located in the central portion of the wetland and UDP-A being located southeast of WDP-9 in an area of similar elevation and with a different plant community.

WDP-A was characterized by black silty clay with strong brown redox concentrations in the soil matrix which did meet the requirements for a hydric soil. Hydrologic indicators included soil saturation at approximately 3 inches, moss trim lines, and crayfish burrows. Vegetation at WDP-A consisted of a stand of water oak underlain by bare soil and dead leaves. Vegetation at WDP-A met the dominance and prevalence tests for hydrophytic vegetation.

UDP-A was characterized by black clay soil with strong brown redox concentrations in the soil matrix which did meet the requirements for a hydric soil. Hydrologic indicators were not observed within the vicinity of UDP-A. Vegetation at UDP-A consisted of musclewood and beech underlain by an herbaceous stratum dominated by bermudagrass and balloonvine. Vegetation at UDP-A did not meet tests for hydrophytic vegetation.



Wetland A was a palustrine forested wetland. The wetland was located in a stand of water oaks with bare earth beneath the trees and was ringed by nutsedge, marsh elder, and balloonvine. Wetland A was located on the northeastern portion of the Project. Wetland A appeared to be fed by overland flow from the north and northeast. During periods of high precipitation, Wetland 9 may overtop along its southern and eastern edges and overland flow from the wetland would fan out into the surrounding forest. The nearest feature to the wetland is a drainage ditch over 1,100 feet south and off of the Project. ECS does not consider Wetland A to be a potential Water of the US due its lack of connectivity with other features.

Data point WDP-B was associated with Wetland B; WDP-B being located in the northern portion of the wetland. UDP-12 served as the associated upland data point, being located west of WDP-B in an area of higher elevation and with a different plant community.

WDP-B was characterized by black silty clay with reddish-yellow redox concentrations in the soil matrix which did meet the requirements for a hydric soil. Hydrologic indicators included saturation at approximately 4 inches, a sparse vegetated concave surface, and a FAC-neutral test. Vegetation at WDP-B consisted of an herbaceous stratum dominated by Torrey's rush and prostrate knotweed. Vegetation at WDP-B met the dominance and prevalence tests for hydrophytic vegetation.

Wetland B was a palustrine emergent wetland. The wetland was ringed by rushes and knotweed transitioning to bermudagrass and balloonvine. Wetland B was located on the northeastern portion of the Project. Wetland B appeared to be fed by overland flow from the north and northeast. During periods of high precipitation, Wetland B may overtop along its southern edge and overland flow from the wetland would fan out into the surrounding pasture. The nearest feature to the wetland is a drainage ditch over 1,000 feet south and off of the Project. ECS does not consider Wetland B to be a potential Water of the US due its lack of connectivity with other features.

No streams were observed on the Project. Wetland 2 may flow southeast during periods of high precipitation, however the lack of observed flow and observed wetland characteristics led to it being considered a wetland.

4.6 Jurisdictional Discussion

ECS considers Wetland 2 to be a potential Water of the US due to its observed connectivity to off-site features and eventually the Red River. ECS does not consider Wetlands 1, 7, 9, 10, A, and B to be jurisdictional features due to the lack of observed connectivity with other potentially jurisdictional features.

5.0 RESULTS

Based on our field investigation, potential Waters of the U.S. are located on the Project and may be subject to permitting under Section 404 of the Clean Water Act.

Table 2 summarizes the potential Waters of the U.S. Table 3 summarizes the potential wetland data points. A map of the results of the investigation is included in Appendix A, Figure 3.

Please note the final authority in determining jurisdiction of a water feature, including significant nexus decisions, rests with USACE.



Feature	Classification	Width at Ordinary High Water Mark	Depth at Ordinary High Water Mark	Length	Surface Area	Potentially Jurisdictional
Wetland 1	PEM	N/A	N/A	N/A	0.14 acres	No
Wetland 2	PEM	N/A	N/A	N/A	1.29 acres	Yes
Wetland 7	PUBHx	N/A	N/A	N/A	4.31 acre.	No
Wetland 9	PUB	N/A	N/A	N/A	0.21 acres	No
Wetland A	PFO	N/A	N/A	N/A	1.18 acres	No
Wetland B	PEM	N/A	N/A	N/A	0.11 acres	No

Table 2: Onsite Features

Table 3: Data Points Summary

Data Point	Lat/Long	Hydrology	Hydrophytic Vegetation	Hydric Soils	Classification
	33.533037,				
WDP-1	-93.905303	Yes	Yes	Yes	PEM
UDP-1	33.532974, -93.905628	No	No	No	Non-wetland
T1DP1	33.531082, -93.898774	No	No	No	Non-wetland
WDP-2	33.535940, -93.900115	Yes	Yes	Yes	PEM
UDP-2	33.535901, -93.900171	No	No	No	Non-wetland
WDP-3	33.535549, -93.896232	Yes	No	Yes	Non-wetland
UDP-3	33.535479, -93.896253	No	No	No	Non-wetland
WDP-4	33.535336, -93.896061	Yes	Yes	No	Non-wetland
UDP-4	33.535406, -93.896011	No	No	No	Non-wetland
T2DP1	33.538028, -93.894883	No	No	No	Non-wetland
T2DP2/WDP-5	33.532119, -93.891873	Yes	Yes	Yes	PEM
T2DP2/WDP-5 (10/20)	33.532119, -93.891873	No	No	Yes	Non-wetland
DP-1	33.532434, -93.885757	No	No	Yes	Non-wetland
UDP-5	33.532302, -93.892160	No	No	No	Non-wetland
T3DP1	33.540763, -93.889044	No	No	No	Non-wetland
T4DP1	33.543258, -93.883194	No	No	No	Non-wetland
T4DP2/WDP-6	33.535890, -93.878564	Yes	Yes	Yes	PEM
T4DP2/WDP-6 (10/20)	33.535890, -93.878564	No	No	Yes	Non-wetland



Data Point	Lat/Long	Hydrology	Hydrophytic Vegetation	Hydric Soils	Classification
DP-2	33.530349, -93.871750	No	No	Yes	Non-wetland
UDP-6	33.535872, -93.878508	No	No	Yes	Non-wetland
T5DP1	33.545535, -93.877190	Yes	No	No	Non-wetland
WDP-7	33.548507, -93.874024	Yes	Yes	Yes	PUBHx
UDP-7	33.547968, -93.873814	No	No	No	Non-wetland
T6DP1	33.547146, -93.870563	No	No	No	Non-wetland
T7DP1/WDP-8	33.550055, -93.864193	Yes	No	No	Non-wetland
UDP-8	33.550230, -93.864959	No	No	No	Non-wetland
WDP-9	33.548709, -93.863120	Yes	Yes	Yes	PUB
UDP-9	33.548710, -93.863373	No	No	No	Non-wetland
WDP-10	33.542276, -93.872650	Yes	Yes	Yes	PEM
UDP-10	33.542242, -93.872495	No	No	Yes	Non-wetland
T8DP1/WDP- 11	33.547225, -93.856825	Yes	Yes	Yes	PFO
T28DP1/WDP- 11 (10/20)	33.547225, -93.856825	No	Yes	Yes	Non-wetland
UDP-11	33.547446, -93.856722	No	No	No	Non-wetland
T9DP1/WDP- 12	33.547643, -93.851020	Yes	Yes	Yes	PFO
T9DP1/WDP- 12 (10/20)	33.547643, -93.851020	No	Yes	Yes	Non-wetland
UDP-12	33.547541, -93.850803	No	No	No	Non-wetland
WDP-A	33.547608, -93.853648	Yes	Yes	Yes	PFO
UDP-A	33.547382, -93.852828	No	No	Yes	Non-wetland
WDP-B	33.547358, -93.850057	Yes	Yes	Yes	PEM

6.0 SUMMARY

Based on our Wetland Delineation, potentially jurisdictional WOUS do appear to be present on the Project site. Final authority in determining jurisdiction of a water feature, including significant nexus decisions, rests with USACE.

The delineated WOUS boundaries are subject to change during the jurisdictional determination meeting with the USACE. ECS cannot guarantee that field conditions and/or WOUS boundaries will not change over time.



7.0 REFERENCES

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Appendix I: Figures





Figure 1 - Project Location Map

REDI Arkansas Manufacturing Center US Highway 67 and Miller County Road 64 Homan Township, Texarkana, Miller County, Arkansas 71854 ECS Project 51:2106-A (Rev. 1)





Figure 2 - USGS Topographic Map

Fulton, Arkansas and Homan, Arkansas Quadrangles 2019 REDI Arkansas Manufacturing Center US Highway 67 and Miller County Road 64 Homan Township, Texarkana, Miller County, Arkansas 71854



ECS Project 51:2106-A (Rev. 1)





Figure 3 - Results Summary REDI Arkansas Manufacturing Center US Highway 67 and Miller County Road 64 Homan Township, Texarkana, Miller County, Arkansas 71854 ECS Project 51:2106-A (Rev. 1)







Figure 4 - Western Project Detail

REDI Arkansas Manufacturing Center US Highway 67 and Miller County Road 64 Homan Township, Texarkana, Miller County, Arkansas 71854 ECS Project 51:2106-A (Rev.1)





Figure 5 - South Central Detail

REDI Arkansas Manufacturing Center US Highway 67 and Miller County Road 64 Homan Township, Texarkana, Miller County, Arkansas 71854 ECS Project 51:2106-A (Rev. 1)







Figure 6 - Southeast Project Detail

REDI Arkansas Manufacturing Center US Highway 67 and Miller County Road 64 Homan Township, Texarkana, Miller County, Arkansas 71854 ECS Project 51:2106-A (Rev. 1)







Figure 7 - Wetland 7 Detail REDI Arkansas Manufacturing Center US Highway 67 and Miller County Road 64 Homan Township, Texarkana, Miller County, Arkansas 71854 ECS Project 51:2106-A (Rev. 1)







Figure 8 - Wetland 9 Detail REDI Arkansas Manufacturing Center US Highway 67 and Miller County Road 64 Homan Township, Texarkana, Miller County, Arkansas 71854 ECS Project 51:2106-A (Rev. 1)







REDI Arkansas Manufacturing Center US Highway 67 and Miler County Road 64 Homan Township, Texarkana, Miler County, Arkansas 71854 ECS Project 51:2106-A (Rev. 1)





Figure 10 - Eastern Project Detail

REDI Arkansas Manufacturing Center US Highway 67 and Miller County Road 64 Homan Township, Texarkana, Miller County, Arkansas 71854 ECS Project 51:2106-A (Rev. 1)



Appendix II: Attachments

Attachment 1:

NRCS Soil Map Report



United States Department of Agriculture



Natural Resources Conservation Service 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 Lafayette, Little River, and Miller Counties, Arkansas

REDI Arkansas



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

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

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.



MAP LEGEND		MAP INFORMATION	
Area of Interest (AOI) Area of Interest (AOI)	Spoil AreaStony Spot	The soil surveys that comprise your AOI were mapped at 1:20,000.	
Soil Map Unit Polygons	 Very Stony Spot Wet Spot 	Please rely on the bar scale on each map sheet for map measurements.	
Soil Map Unit Points	 △ Other ✓ Special Line Features 	Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)	
Blowout Borrow Pit Clay Spot	Water Features Streams and Canals Transportation HHH Rails	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: Lafayette, Little River, and Miller Counties, Arkansas	
Closed Depression Gravel Pit	US Routes		
 Gravelly Spot Landfill Lava Flow 	Major Roads Local Roads Background		
Marsh or swamp Mine or Quarry Miscellaneous Water	Aerial Photography	Survey Area Data: Version 20, Jun 9, 2020 Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.	
 Perennial Water Rock Outcrop 		Date(s) aerial images were photographed: Sep 14, 2019—Jan 7, 2020	
Saline Spot Sandy Spot Severely Eroded Spot		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.	
Sinkhole Slide or Slip			
💋 Sodic Spot			

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
5	Billyhaw clay, 0 to 1 percent slopes, rarely flooded	1,612.2	35.7%
14	Caspiana silt loam, 0 to 1 percent slopes	69.9	1.6%
38	Latanier clay, ridge and swale, 0 to 3 percent slopes	190.7	4.2%
53	Bossier clay, 0 to 1 percent slopes	1,594.9	35.4%
55	Rilla silt loam, 0 to 1 percent slopes	997.3	22.1%
71	Severn silt loam, 0 to 1 percent slopes, rarely flooded	2.0	0.0%
72	Severn silt loam, 0 to 3 percent slopes, gently undulating, rarely flooded	9.7	0.2%
86	Water	34.4	0.8%
Totals for Area of Interest		4,511.1	100.0%

Map Unit Legend

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas

are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Lafayette, Little River, and Miller Counties, Arkansas

5-Billyhaw clay, 0 to 1 percent slopes, rarely flooded

Map Unit Setting

National map unit symbol: 2tglt Elevation: 250 to 450 feet Mean annual precipitation: 42 to 59 inches Mean annual air temperature: 61 to 66 degrees F Frost-free period: 200 to 260 days Farmland classification: All areas are prime farmland

Map Unit Composition

Billyhaw and similar soils: 85 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Billyhaw

Setting

Landform: Flood-plain steps Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Parent material: Red river clayey alluvium over red river loamy alluvium

Typical profile

A - 0 to 7 inches: clay Bw - 7 to 25 inches: clay Bkss - 25 to 57 inches: clay 2Ck - 57 to 80 inches: silt loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: RareNone
Frequency of ponding: None
Calcium carbonate, maximum content: 8 percent
Maximum salinity: Nonsaline (0.1 to 0.3 mmhos/cm)
Available water capacity: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): 3w Land capability classification (nonirrigated): 3w Hydrologic Soil Group: D Ecological site: F131CY005LA - Clayey Floodplain Hydric soil rating: No

Minor Components

Perry, frequently flooded

Percent of map unit: 10 percent Landform: Backswamps Landform position (three-dimensional): Tread Down-slope shape: Concave Across-slope shape: Linear Ecological site: F131CY005LA - Clayey Floodplain Hydric soil rating: Yes

Aquents, rarely flooded

Percent of map unit: 5 percent Landform: Backswamps Landform position (three-dimensional): Tread Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

14—Caspiana silt loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2s5kv Elevation: 120 to 200 feet Mean annual precipitation: 45 to 59 inches Mean annual air temperature: 59 to 66 degrees F Frost-free period: 219 to 293 days Farmland classification: All areas are prime farmland

Map Unit Composition

Caspiana and similar soils: 90 percent *Minor components:* 10 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Caspiana

Setting

Landform: Flood-plain steps Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Parent material: Holocene loamy alluvium

Typical profile

Ap - 0 to 15 inches: silt loam Bt - 15 to 27 inches: silt loam C - 27 to 80 inches: silt loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 47 to 51 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline (0.1 to 0.3 mmhos/cm)
Available water capacity: High (about 11.1 inches)

Interpretive groups

Land capability classification (irrigated): 1 Land capability classification (nonirrigated): 1 Hydrologic Soil Group: B Ecological site: F131CY002LA - Loamy Floodplain Hydric soil rating: No

Minor Components

Armistead

Percent of map unit: 9 percent Landform: Natural levees Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Ecological site: F131CY003LA - Clay Cap Floodplain Hydric soil rating: No

Buxin, occasionally flooded

Percent of map unit: 1 percent Landform: Flood-plain steps Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Talf, dip Down-slope shape: Linear, concave Across-slope shape: Concave, linear Ecological site: F131CY005LA - Clayey Floodplain Hydric soil rating: No

38—Latanier clay, ridge and swale, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2wdkw Elevation: 180 to 310 feet Mean annual precipitation: 42 to 59 inches Mean annual air temperature: 59 to 70 degrees F *Frost-free period:* 200 to 240 days *Farmland classification:* All areas are prime farmland

Map Unit Composition

Latanier and similar soils: 90 percent *Minor components:* 10 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Latanier

Setting

Landform: Flood-plain steps Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Parent material: Clayey alluvium over loamy alluvium

Typical profile

Ap - 0 to 4 inches: clay Bss - 4 to 29 inches: clay 2Ck1 - 29 to 39 inches: silt loam 2Ck2 - 39 to 82 inches: stratified very fine sandy loam to loamy very fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 8 percent
Maximum salinity: Nonsaline (0.1 to 0.3 mmhos/cm)
Available water capacity: High (about 11.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3w Hydrologic Soil Group: D Ecological site: F131CY003LA - Clay Cap Floodplain Hydric soil rating: No

Minor Components

Perry

Percent of map unit: 5 percent Landform: Flood plains Landform position (three-dimensional): Tread Down-slope shape: Concave Across-slope shape: Linear Ecological site: F131CY005LA - Clayey Floodplain Hydric soil rating: Yes

Billyhaw

Percent of map unit: 5 percent

Custom Soil Resource Report

Landform: Flood-plain steps on river valleys Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Ecological site: F131CY005LA - Clayey Floodplain Hydric soil rating: No

53—Bossier clay, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2tglf Elevation: 60 to 300 feet Mean annual precipitation: 42 to 59 inches Mean annual air temperature: 55 to 70 degrees F Frost-free period: 219 to 270 days Farmland classification: All areas are prime farmland

Map Unit Composition

Bossier and similar soils: 90 percent *Minor components:* 10 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Bossier

Setting

Landform: Flood-plain steps Landform position (two-dimensional): Footslope Landform position (three-dimensional): Talf Down-slope shape: Concave Across-slope shape: Linear Parent material: Clayey alluvium derived from sedimentary rock

Typical profile

Ap - 0 to 5 inches: clay Bssg - 5 to 21 inches: clay 2Bss - 21 to 32 inches: clay 2Ck - 32 to 80 inches: clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 14 percent
Maximum salinity: Nonsaline (0.1 to 0.3 mmhos/cm)

Available water capacity: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): 3w Land capability classification (nonirrigated): 3w Hydrologic Soil Group: D Ecological site: F131CY005LA - Clayey Floodplain Hydric soil rating: Yes

Minor Components

Billyhaw

Percent of map unit: 5 percent Landform: Flood-plain steps Landform position (two-dimensional): Footslope Landform position (three-dimensional): Talf Down-slope shape: Concave Across-slope shape: Linear Ecological site: F131CY005LA - Clayey Floodplain Hydric soil rating: No

Latanier

Percent of map unit: 3 percent Landform: Natural levees Landform position (two-dimensional): Backslope Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Ecological site: F131CY003LA - Clay Cap Floodplain Hydric soil rating: No

Yorktown, frequently flooded

Percent of map unit: 2 percent Landform: Backswamps Landform position (three-dimensional): Talf Down-slope shape: Concave Across-slope shape: Concave Ecological site: F131CY004LA - Wet Clay Bottomland Hydric soil rating: Yes

55—Rilla silt loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: lyvl Elevation: 50 to 100 feet Mean annual precipitation: 42 to 59 inches Mean annual air temperature: 61 to 66 degrees F Frost-free period: 200 to 240 days Farmland classification: All areas are prime farmland

Map Unit Composition

Rilla and similar soils: 90 percent *Minor components:* 10 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Rilla

Setting

Landform: Natural levees Down-slope shape: Convex Across-slope shape: Convex Parent material: Silty and loamy alluvium

Typical profile

Ap - 0 to 7 inches: silt loam *Bt - 7 to 59 inches:* silt loam *C - 59 to 80 inches:* stratified silt loam to silty clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 48 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water capacity: Very high (about 12.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 1 Hydrologic Soil Group: B Ecological site: F131CY002LA - Loamy Floodplain Hydric soil rating: No

Minor Components

Perry

Percent of map unit: 5 percent Landform: Backswamps Down-slope shape: Concave Across-slope shape: Convex Ecological site: F131CY005LA - Clayey Floodplain Hydric soil rating: Yes

Aquepts

Percent of map unit: 5 percent Landform: Depressions Down-slope shape: Concave Across-slope shape: Convex Hydric soil rating: Yes

71—Severn silt loam, 0 to 1 percent slopes, rarely flooded

Map Unit Setting

National map unit symbol: 2tglh Elevation: 130 to 200 feet Mean annual precipitation: 42 to 61 inches Mean annual air temperature: 54 to 77 degrees F Frost-free period: 219 to 276 days Farmland classification: All areas are prime farmland

Map Unit Composition

Severn, rarely flooded, and similar soils: 90 percent Minor components: 10 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Severn, Rarely Flooded

Setting

Landform: Natural levees Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Parent material: Holocene silty alluvium derived from sedimentary rock

Typical profile

Ap - 0 to 8 inches: silt loam *C - 8 to 75 inches:* stratified very fine sandy loam to loam to silt loam *Ab - 75 to 80 inches:* silt loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: NoneRare
Frequency of ponding: None
Calcium carbonate, maximum content: 7 percent
Maximum salinity: Nonsaline (0.1 to 0.3 mmhos/cm)
Available water capacity: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): 1 Land capability classification (nonirrigated): 1 Hydrologic Soil Group: A Ecological site: F131CY002LA - Loamy Floodplain Hydric soil rating: No

Minor Components

Coushatta

Percent of map unit: 7 percent Landform: Natural levees Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Ecological site: F131CY002LA - Loamy Floodplain Hydric soil rating: No

Unnamed, hydric

Percent of map unit: 3 percent Landform: Natural levees Landform position (two-dimensional): Footslope Landform position (three-dimensional): Talf Down-slope shape: Concave Across-slope shape: Linear Hydric soil rating: Yes

72—Severn silt loam, 0 to 3 percent slopes, gently undulating, rarely flooded

Map Unit Setting

National map unit symbol: 2tglj Elevation: 130 to 200 feet Mean annual precipitation: 42 to 61 inches Mean annual air temperature: 54 to 77 degrees F Frost-free period: 219 to 276 days Farmland classification: All areas are prime farmland

Map Unit Composition

Severn, gently undulating, rarely flooded, and similar soils: 85 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Severn, Gently Undulating, Rarely Flooded

Setting

Landform: Point bars, natural levees Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Parent material: Holocene silty alluvium derived from sedimentary rock

Typical profile

A - 0 to 4 inches: silt loam

C - 4 to 80 inches: stratified very fine sandy loam to silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: NoneRare
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline (0.1 to 0.3 mmhos/cm)
Available water capacity: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): 2e Land capability classification (nonirrigated): 2e Hydrologic Soil Group: A Ecological site: F131CY002LA - Loamy Floodplain Hydric soil rating: No

Minor Components

Coushatta

Percent of map unit: 6 percent Landform: Natural levees Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Ecological site: F131CY002LA - Loamy Floodplain Hydric soil rating: No

Kiomatia, frequently flooded

Percent of map unit: 5 percent Landform: Point bars Landform position (two-dimensional): Footslope Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Ecological site: F131CY001LA - Sandy Floodplain Hydric soil rating: No

Severn, frequently flooded

Percent of map unit: 4 percent Landform: Natural levees Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Ecological site: F131CY002LA - Loamy Floodplain Hydric soil rating: No

86—Water

Map Unit Setting

National map unit symbol: lywn Mean annual precipitation: 42 to 59 inches Mean annual air temperature: 61 to 66 degrees F Frost-free period: 200 to 240 days Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

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Attachment 2:

National Wetlands Inventory Map



U.S. Fish and Wildlife Service National Wetlands Inventory

Texarkana



February 23, 2021

Wetlands



Estuarine and Marine Deepwater

Estuarine and Marine Wetland

- ^{ater} Freshwater Forested/Shrub Wetland
 - Freshwater Pond

Freshwater Emergent Wetland

Lake Other Riverine This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site. Attachment 3:

FEMA Flood Insurance Rate Map





Appendix III: Photographic Log



1 - WDP-1



2 - Soils at WDP-1



3 - Wetland 1



4 - UDP-1



5 - Soils at UDP-1



6 - Project from the southern boundary



7 - T1DP1



8 - Soils at T1DP1



9 - WDP-2



10 - Wetland 2, drainage ditch on the western portion of the Project



11 - Soils at WDP-2



12 - UDP-2



13 - Soils at UDP-2



14 - WDP-3



15 - Area of WDP-3



16 - Soils at WDP-3



17 - UDP-3



18 - Soils at UDP-3


19 - WDP-4



20 - Area of WDP-4



21 - Soils at WDP-4



22 - UDP-4



23 - Soils at UDP-4



24 - T2DP1



25 - Soils at T2DP1



26 - Soils at T2DP1/WDP-5



27 - UDP-5



28 - Soils at UDP-5



29 - T3DP1



30 - Soils at T3DP1



31 - T4DP1



32 - Soils at T4DP1



33 - Soils at T4DP2/WDP-6



34 - UDP-6



35 - Soils at UDP-6



36 - Area of T5DP1



37 - Wetland 7



38 - UDP-7



39 - T6DP1



40 - Wetland 9



41 - Wetland 9



42 - Wetland 10/WDP-10



43 - Soils at WDP-10



44 - Soils at UDP-10



45 - UDP-10



46 - Road through the eastern wooded area



47 - UDP-11



48 - UDP-12



49 - Soils at UDP-11



50 - Northeast pasture



51 - Northeast pasture



52 - Road through eastern portion of the Project



53 - Eastern portion of Project



54 - Forest on the eastern portion of the Project



55 - Soils at UDP-A



56 - Wetland A



57 - Wetland B



58 - South-central portion of the Project



59 - South-central portion of the Project



60 - DP-1



61 - Vegetation at DP-1



62 - Soils at DP-1



63 - Southeastern corner of the Project



64 - Southeastern corner of the Project

Appendix IV: USACE Wetland Data Forms and Stream Data Forms

Project/Site:	REDI Arkansas	City/County: Homan T	ownship, Texark	ana, Miller Count	Sampling Date	: 10/20/2021
Applicant/Owner:	AR-TX REDI		•	ite: Arkansas	Sampling Point	
Investigator(s):	Roger Willis	Section, Township, Ra				
	pasture	Local relief (concave, o	-	concave	e Slo	pe (%): 0
Subregion (LRR or MLRA):				-93.885757	Z Da	tum: WGS 1984
Soil Map Unit Name:	Bossier clay, 0 to 1 per	cent slopes		NWI classificatio	n: N	on-wetland
Are climatic / hydrologic conditions	on the site typical for this time of year?	Yes X No	(lf no, e	explain in Remarks	s.)	
Are Vegetation , Soil	, or Hydrologysignificant	ly disturbed?	Are "Normal Circ	umstances" prese	nt? Yes	X No
	, or Hydrologynaturally p		(If needed, expla	in any answers in		
SUMMARY OF FINDINGS -	Attach site map showing san	npling point locati	ons, transect	ts, important f	features, etc	
Hydrophytic Vegetation Present?	Yes No X					
Hydric Soil Present?	Yes X No	Is the Sam	pled Area			
Wetland Hydrology Present?	Yes No X		•	Yes	NoX	
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators:						
Primary Indicators (minimum of o	ne required: check all that apply)			Secondary Indica	tors (minimum o	of two required)
Surface Water (A1)	Aquatic Faun	าa (B13)		X Surface Soil	Cracks (B6)	
High Water Table (A2)	Marl Deposit	is (B15) (LRR U)		Sparsely Ve	getated Concav	e Surface (B8)
Saturation (A3)		ulfide Odor (C1)		Drainage Pa	tterns (B10)	
Water Marks (B1)		izospheres along Living I	Roots (C3)	Moss Trim L	. ,	
Sediment Deposits (B2)		nce of Reduced Iron (C4) Dry-Season Water Table (C2)				
Drift Deposits (B3)		Reduction in Tilled Soils	(C6)	Crayfish Bur	. ,	(00)
Algal Mat or Crust (B4)	Thin Muck St	(<i>)</i>			isible on Aerial	magery (C9)
Iron Deposits (B5) Inundation Visible on Aerial I		in in Remarks)		Shallow Aqu	Position (D2)	
Water-Stained Leaves (B9)	magery (D7)			FAC-Neutral		
					noss (D8) (LRF	R T. U)
					. , .	· ·
Field Observations:						
Surface Water Present?	Yes <u>No X</u> Depth (inch					
Water Table Present?	Yes <u>No X</u> Depth (inch				N/	
Saturation Present?	Yes <u>No X</u> Depth (inch	les):	wetland Hydr	ology Present?	Yes	No <u></u>
(includes capillary fringe)						
Describe Recorded Data (stream	gauge, monitoring well, aerial photos, p	previous inspection), if a	vailable:			
Remarks:						

/EGETATION (Four Strata) - Use scientific names	s of plant	s.			Sam	pling Poin	nt: E)P-1
				Dominance Test	worksheet:			
	Absolute	Dominant	Indicator	Number of Domina	ant Species			
Tree Stratum (Plot size: r=30')	% Cover	Species?	Status	That Are OBL, FAG			0	(A)
				matrice OBE, 174			Ŭ	_ (/ ()
0				Total Number of D	ominant			
							4	
3				Species Across Al	i Strata:		1	(B)
4.								
5.				Percent of Domina	•			
6				That Are OBL, FAC	CW, or FAC:		0.0	(A/B)
7				Prevalence Index	workshoot			
8							.14	
	0	= Total Cov	er	Total % Cove		_	ultiply by:	
50% of total cover: 0	20% (of total cover	0	OBL species	0	x 1 =	0	
Sapling/Shrub Stratum (Plot size: r=20')				FACW species	15	x 2 =	30	
1				FAC species	0	x 3 =	0	
2.				FACU species	100	x 4 =	400	
				UPL species	20	x 5 =	100	
3				Column Totals:	135	(A)	530	(B)
				-				、 /
				Prevalence I	ndex = B/A =	:	3.93	
6								
7				Hydrophytic Vege	etation Indic	ators:		
8				1 - Rapid Test	t for Hydroph	vtic Vege	tation	
	0	= Total Cov		2 - Dominance	• • •			
50% of total cover: 0	20% (of total cover	0	3 - Prevalence				
Herb Stratum (Plot size: 1 sq. meter)				Problematic F				\ \
1. Cynodon dactylon / Bermuda grass	80	Yes	FACU			egetation	(Lypiain))
2. Torilis nodosa / Wild parsley, Short sock-destroyer	20	No	UPL	1				
3. Poa pratensis / Kentucky blue grass	20	No	FACU	¹ Indicators of hydri		•	•••	st
4. Eleocharis lanceolata / Dagger-leaf spike-rush	15	No	FACW	be present, unless	disturbed or	problema	atic.	
5.				Definitions of Fou	ur Vogotatio	- Strata		
				Deminitions of For	ur vegetation	i Sirala		
							(7.0	
				Tree - Woody plan more in diameter a				
				height.	it bicast noig	та (выт),	regardies	3 01
9				g.m				
10								
11				Sapling/Shrub - V				
12				than 3 in. DBH and	d greater thar	or equal ا	to 3.28 ft	(1 m)
	135	= Total Cov	er	tall.				
50% of total cover: 67	20% (of total cover	27					
Woody Vine Stratum (Plot size: r=20')				Herb - All herbace	ous (non-woo	odv) plant	s. regardle	ess of
1.				size, and woody pl				
2.								
3.							han 0 00 ff	1
4				Woody vines - All height.	woody vines	greater t	nan 3.28 II	In
4 5.				neight.				
v	0	= Total Cov	or	Hydrophytic				
		-						
50% of total cover: 0	20% (of total cover	0	Vegetation	Va -			
				Present?	Yes		x	

Remarks: (if observed, list morphological adaptions below).

S	O	11	

Profile Descr Depth	iption: (Describe to th Matrix	e depth nee		e indicator c Features	or confirm	the absen	ce of indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	7.5YR 5/1	80	7.5YR 6/8	20	<u> </u>	 M	clay	
								_
					·			
	·							
	·							
¹ Type: C=Con	centration, D=Depletior	n, RM=Reduc	ed Matrix, MS=Mask	ed Sand Gra	iins.		² Location	n: PL=Pore Lining, M=Matrix.
Hydric Soil Ir	dicators: (Applicable	to all LRRs.	unless otherwise n	oted.)			Indicators fo	r Problematic Hydric Soils ³ :
Histosol		,		, elow Surface	e (S8) (LR	RR S, T, U)		ick (A9) (LRR O)
Histic Ep	ipedon (A2)		Thin Dark S	urface (S9)	(LRR S, T	; U)		ick (A10) (LRR S)
Black His				ky Mineral (F				Vertic (F18) (outside MLRA 150A,B)
Hydrogei	n Sulfide (A4)		Loamy Gley	ed Matrix (F	2)		Piedmor	nt Floodplain Soils (F19) (LRR P, S, T)
Stratified	Layers (A5)		X Depleted Ma	atrix (F3)	,		Anomalo	ous Bright Loamy Soils (F20)
	Bodies (A6) (LRR P, T,	U)	Redox Dark	Surface (F6	5)		(MLRA 1	
	cky Mineral (A7) (LRR		Depleted Da	ark Surface (, F7)		Red Par	ent Material (TF2)
Muck Pre	esence (A8) (LRR U)		Redox Depr	ressions (F8))		Very Sha	allow Dark Surface (TF12)
1 cm Mu	ck (A9) (LRR P, T)		Marl (F10)	(LRR U)			Other (E	xplain in Remarks)
Depleted	Below Dark Surface (A	.11)	Depleted Oc	chric (F11) (I	MLRA 151)		. ,
	rk Surface (A12)	,	Iron-Mangai	nese Masses	s (F12) (LR	R O, P, T)	³ Indicators	of hydropphobic vegetation and
Coast Pr	airie Redox (A16) (ML	RA 150A)		face (F13) (I			wetland	d hydrology must be present.
Sandy M	ucky Mineral (S1) (LR	R O, S)	Delta Ochrid	c (F17) (MLF	RA 151)		unless	disturbed or problematic.
	leyed Matrix (S4)			ertic (F18) (I		A, 150B)		
	edox (S5)			loodplain Soi			()	
Stripped	Matrix (S6)		Anomalous	Bright Loam	y Soils (F2	0) (MLRA	149A, 153C, 153D)
Dark Sur	face (S7) (LRR P, S, T	, U)						
Restrictive	ayer (if present):							
Type:	ayor (ii present).							
Depth (inc	hes).						Hydric Soil Pres	ent? Yes X No
							Tryanc Son Fles	
Remarks:								

Project/Site:	REDI Arkansas	City/County: Homan T	ſownship, Texarka	na, Miller Count	Sampling [Date: 10/20/2021
Applicant/Owner:	AR-TX REDI			e: Arkansas	Sampling F	
Investigator(s):	Roger Willis	Section, Township, Ra			eanipinig i	
Landform (hillslope, terrace, etc):		Local relief (concave, o		none		Slope (%): 2
Subregion (LRR or MLRA):		33.530349		-93.87175		Datum: WGS 1984
Soil Map Unit Name:			Long	NWI classificatio		Non-wetland
	on the site typical for this time of year?	· ·	(If no, e			Non-wettand
	X , or Hydrologysignificant		Are "Normal Circu	•	,	es X No
	, or Hydrologysignificant		(If needed, explain			3 <u> </u>
				•	,	ata
	Attach site map showing san		ons, transect	s, important	leatures,	elc.
Hydrophytic Vegetation Present?						
Hydric Soil Present?	Yes <u>X</u> No	Is the Sam	pled Area			
Wetland Hydrology Present?	Yes NoX	within a We	etland?	Yes	No	X
Remarks: Data point appeared	d to have been tilled recently					
HYDROLOGY						
Wetland Hydrology Indicators:						
	one required: check all that apply)		;	Secondary Indica	tors (minim	um of two required)
Surface Water (A1)	Aquatic Faun	na (B13)	÷	Surface Soil		
High Water Table (A2)		s (B15) (LRR U)	-		•	, ncave Surface (B8)
Saturation (A3)		Ilfide Odor (C1)	-	Drainage Pa	-	. ,
Water Marks (B1)	Oxidized Rhi	zospheres along Living I	Roots (C3)	Moss Trim L		
Sediment Deposits (B2)	Presence of	Reduced Iron (C4)	· · ·	Dry-Season	Water Table	e (C2)
Drift Deposits (B3)	Recent Iron F	Reduction in Tilled Soils	(C6)	Crayfish Bur	rows (C8)	
Algal Mat or Crust (B4)	Thin Muck St	urface (C7)		Saturation V	isible on Ae	erial Imagery (C9)
Iron Deposits (B5)	Other (Explai	in in Remarks)	-	Geomorphic	Position (D	(2)
Inundation Visible on Aerial	Imagery (B7)		-	Shallow Aqu	iitard (D3)	
Water-Stained Leaves (B9)			-	FAC-Neutra	Test (D5)	
—			-	Sphagnum r	noss (D8) (LRR T, U)
Field Observations:	Ver Ne V Denth (in ele					
Surface Water Present?	Yes No X Depth (inch Yes No X Depth (inch					
Water Table Present? Saturation Present?		,			Vee	No. V
	Yes <u>No X</u> Depth (inch	es).	Wetland Hydro	nogy Present?	res	<u>No X</u>
(includes capillary fringe)						
Describe Recorded Data (stream	ı gauge, monitoring well, aerial photos, p	previous inspection), if a	vailable:			
Remarks:						

EGETATION (Four Strata) - Use scientific name	s of plant	s.			Samp	oling Poin	nt:	DP-2
· · ·				Dominance Test	worksheet:			
	Absolute	Dominant	Indicator	Number of Domina				
							-	
Free Stratum (Plot size:r=30')	% Cover	Species?	Status	That Are OBL, FA	CW, or FAC:		0	(A)
l								
2				Total Number of D	ominant			
l				Species Across Al	l Strata:		2	(B)
								_
				Percent of Domina	ant Species			
)				That Are OBL, FA	CW. or FAC:		0.0	(A/B)
								_ (' ' /
3.				Prevalence Index	worksheet:			
	0	= Total Cov	er	Total % Cove	r of:	Mu	ultiply by:	
50% of total cover: 0	20%	of total cover		OBL species	0	x 1 =	0	
Sapling/Shrub Stratum (Plot size: r=20')	2070			FACW species	0	x 2 =	0	
				FAC species	0	x 3 =	0	
·				FACU species	35	x4 =	140	
·				· · -				
				UPL species	10	x 5 = _	50	
				Column Totals:	45	(A)	190	(B)
				Prevalence	Index = B/A =		4.22	
				Hydrophytic Vege				
	0	= Total Cov	er	1 - Rapid Tes		-	tation	
50% of total cover: 0	20% (of total cover		2 - Dominanc	e Test is >50%	%		
lerb Stratum (Plot size: 1 sq. meter)	2070			3 - Prevalenc	e Index ≤3.0¹			
	05		FAOL	Problematic H	-lydrophytic Ve	egetation	1 (Explain)
. Cynodon dactylon / Bermuda grass	35	Yes	FACU					
. Torilis nodosa / Wild parsley, Short sock-destroyer	10	Yes	UPL	¹ Indicators of hydr	ic soil and we	tland hvd	Iroloav mu	st
L	_			be present, unless		-		
				Definitions of For	ur Vegetation	1 Strata		
					-			
				Tree - Woody plan	nts. excludina	vines. 3 i	in. (7.6 cm)) or
				more in diameter a	•		· · ·	,
				height.	C C	· · ·	•	
0								
1								
				Sapling/Shrub - V				
2				than 3 in. DBH and tall.	a greater than	or equal	το 3.28 π ((1 m)
	45	= Total Cov		lall.				
50% of total cover: 22	20% (of total cover	9					
Voody Vine Stratum (Plot size: r=20')				Herb - All herbace	ous (non-woc	ody) plant	ts, regardle	ess of
l.				size, and woody p				
2.		_						
3.				Woody vines - All	l woody vinos	areator t	han 2 29 fl	tin
				-	woody vines	greater t	nan 5.20 it	. 10
 I.		_		height.				
				height.				
5	0	= Total Cov		Hydrophytic				
	0				Yes		o <u>X</u>	

Remarks: (if observed, list morphological adaptions below). Area of the data point appeared to have been tilled.

S	O	11	

Depth	Matrix		Redox	Features)
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	7.5YR 2.5/1	90	7.5YR 6/8			M		
<i>.</i>	oncentration, D=Depletio				 ains.	·		on: PL=Pore Lining, M=Matrix.
Histoso Histic E Black H Hydrog Stratifie Organi 5 cm M Muck F 1 cm M Deplete Thick D Coast I Sandy Sandy Sandy Strippe	Indicators: (Applicable of (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Layers (A5) c Bodies (A6) (LRR P, T, Aucky Mineral (A7) (LRR Presence (A8) (LRR U) Auck (A9) (LRR P, T) ed Below Dark Surface (A Dark Surface (A12) Prairie Redox (A16) (ML Mucky Mineral (S1) (LR Gleyed Matrix (S4) Redox (S5) ed Matrix (S6) urface (S7) (LRR P, S,	, U) R P, T, U) A11) RA 150A) RR O, S)	Polyvalue E Thin Dark S Loamy Muc Loamy Gley Depleted M X Redox Dark Depleted D Redox Dep Marl (F10) Depleted O Iron-Manga Umbric Sur Delta Ochri Reduced Ve Piedmont F	elow Surfac surface (S9) ky Mineral (ved Matrix (F3) s Surface (F4) ark Surface (F4) chric (F11) nese Masse face (F13) c (F17) (ML ertic (F18) loodplain So	(LRR S, T F1) (LRR (F2) 6) (F7) 3) (MLRA 151 (S (F12) (LR (LRR P, T, U .RA 151) (MLRA 150) (MLRA 150)	r, U) O) RR O, P, T) U) DA, 150B) MLRA 149A	1 cm M 2 cm M Reduce Piedmo Anomal (MLRA Red Pa Very Sh Other (f ³ Indicator wetlar unless	arent Material (TF2) nallow Dark Surface (TF12) Explain in Remarks) rs of hydropphobic vegetation and nd hydrology must be present. s disturbed or problematic.
Туре:	Layer (if present):						Hydric Soil Pre	esent? Yes <u>X</u> No
Remarks:	Area of the data point a	appeared to ha	ave been tilled.					

Project/Site:	REDI Arkansas	City/County: Homan Township, Texar	rkana, Miller Count Sampling Date:	03/02/2021
Applicant/Owner:	AR-TX REDI		tate: Arkansas Sampling Point:	WDP-1
Investigator(s):	Roger Willis	Section, Township, Range:		
Landform (hillslope, terrace, etc):	field	Local relief (concave, convex, none):	concave Slope	e (%): 0
Subregion (LRR or MLRA):	LRR P Lat:		-93.905303 Datu	im: WGS 1984
Soil Map Unit Name:	Billyhaw clay, 0 to 1 percent slo	opes, rarely flooded	NWI classification: Nor	n-wetland
Are climatic / hydrologic conditions	on the site typical for this time of year?	Yes No X (If no	, explain in Remarks.)	
Are Vegetation , Soil	, or Hydrology significant	tly disturbed? Are "Normal Cir	rcumstances" present? Yes	X No
	, or Hydrology naturally p	problematic? (If needed, expl	lain any answers in Remarks.)	
		npling point locations, transe	cts, important features, etc.	
Hydrophytic Vegetation Present?			· ·	
Hydric Soil Present?	Yes X No	Is the Sampled Area		
Wetland Hydrology Present?	Yes X No	within a Wetland?	Yes X No	
Remarks:				
High precipitation ir	n the preceding weeks.			
HYDROLOGY				
Wetland Hydrology Indicators:	: one required: check all that apply)		Secondary Indicators (minimum of	two required)
X Surface Water (A1)	Aquatic Faur	aa (B13)	Surface Soil Cracks (B6)	two required)
High Water Table (A2)		ts (B15) (LRR U)	Sparsely Vegetated Concave	Surface (B8)
Saturation (A3)		ulfide Odor (C1)	Drainage Patterns (B10)	Sullace (DO)
Water Marks (B1)		izospheres along Living Roots (C3)	Moss Trim Lines (B16)	
Sediment Deposits (B2)		Reduced Iron (C4)	Dry-Season Water Table (C2)	
				н.
Drift Deposits (B3)		Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)	
X Algal Mat or Crust (B4)	Thin Muck S		Saturation Visible on Aerial Im	lagery (C9)
Iron Deposits (B5)		in in Remarks)	Geomorphic Position (D2)	
X Inundation Visible on Aerial	Imagery (B7)		Shallow Aquitard (D3)	
X Water-Stained Leaves (B9)			FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR 1	T 11)
				1, 0)
Field Observations:				
Surface Water Present?	Yes X No Depth (inch	nes): <u>5</u>		
Water Table Present?	Yes NoX Depth (inch	nes):		
Saturation Present?	Yes NoX Depth (inch	nes): Wetland Hyd	drology Present? Yes X	No
(includes capillary fringe)				
Describe Descrided Date (stream				
Describe Recorded Data (stream	n gauge, monitoring well, aerial photos,	previous inspection), il available:		
Remarks:				

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

VEGETATION (Four Strata) - Use scientific names	s of plant	s.		Sampling Point: WDP-1
				Dominance Test worksheet:
	Absolute	Dominant	Indicator	Number of Dominant Species
Tree Stratum (Plot size: r = 30')	% Cover	Species?	Status	That Are OBL, FACW, or FAC: 2 (A)
1. <i>Ulmus crassifolia /</i> Cedar elm	25	Yes	FAC	
2				Total Number of Dominant
3				Species Across All Strata: 3 (B)
4				
5				Percent of Dominant Species
6				·
7				That Are OBL, FACW, or FAC: <u>66.7</u> (A/B)
8				Prevalence Index worksheet:
	25	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover: 12	20% (of total cover:	5	OBL species 0 $x 1 = 0$
Sapling/Shrub Stratum (Plot size: r=20')				FACW species $50 \times 2 = 100$
1				FAC species $40 \times 3 = 120$
2.				FACU species $30 \times 4 = 120$
3.				$\frac{1}{120}$ UPL species 0 x 5 = 0
4.				Column Totals: 120 (A) 340 (B)
5.				
6.				Prevalence Index = B/A = 2.83
7.				
8.				Hydrophytic Vegetation Indicators:
	0	= Total Cov	er	1 - Rapid Test for Hydrophytic Vegetation
50% of total cover: 0	20% (of total cover:	: 0	X 2 - Dominance Test is >50%
Herb Stratum (Plot size: 1 square meter)				X 3 - Prevalence Index ≤3.0 ¹
1. Paspalum bifidum / Pitchfork crown grass	50	Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Cynodon dactylon / Bermuda grass	30	Yes	FACU	
3. Ranunculus fascicularis / Early buttercup	15	No	FAC	¹ Indicators of hydric soil and wetland hydrology must
4.				be present, unless disturbed or problematic.
5.				
6.				Definitions of Four Vegetation Strata:
7.				
8.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
9.				more in diameter at breast height (DBH), regardless of
10				height.
11				
12.				Sapling/Shrub – Woody plants, excluding vines, less
	95	= Total Cov	er	than 3 in. DBH and greater than 3.28 ft (1 m) tall.
50% of total cover: 47		of total cover:		
Woody Vine Stratum (Plot size: r=20')				Herb – All herbaceous (non-woody) plants, regardless
1.				of size, and woody plants less than 3.28 ft tall.
2.				
3.				Woody vine – All woody vines greater than 3.28 ft in
				height.
4 5.				
· · ·	0	= Total Cov		Hydrophytic
50% of total cover: 0		of total cover:		Vegetation
	20 /0 0			Present? Yes X No
				1

Remarks (if observed, list morphological adaptions below).

S	O	11	

(Inches) Color (moist) % Calor (moist) % Type' Loc ² Texture Remarks 0-16 10YR 3/2 80 10YR 3/6 20 C M clay	Depth	Matrix			Features				
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ?Location: PL=Pore Lining, M=Matrix. Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histosol (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, B Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Organic Bodies (A6) (LRR P, T, U) X Redox Dark Surface (F6) (MLRA 153B) S cm Mucky Mineral (A7) (LRR P, T) Mart (F10) (LRR U) Red Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Mart (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Corhic (F11) (MLRA 151) other (Explain in Remarks) Depleted Matrix (S4) Reduced Vertic (F18) (MLRA 150) unless disturbed or problematic. Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) unless disturbed or problematic. Sandy Gleyed Matrix (S6) Piedmont Floodplain Soils (F19	(inches)	Color (moist)	%	Color (moist)	% Тур	e ¹	Loc ²	Texture	Remarks
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histosol (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A9) (LRR O) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, B Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) organic Bodies (A6) (LRR P, T, U) X Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) other (Explain in Remarks) Depleted Below Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) alndicators of hydropphobic vegetation and wetland hydrology must be present. unless disturbed or problematic. Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 150A, 150B) anomalous Bright Loamy Soils (F20) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A), 153C, 153D)<	0-16	10YR 3/2	80	10YR 3/6	20 C		M	clay	
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histosol (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A0) (LRR O) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, B Hydrogen Sulfide Layers (A5) Depleted Matrix (F2) Piedmont Floodplain Soils (F20) Organic Bodies (A6) (LRR P, T, U) X Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Depressions (F8) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Other (Explain in Remarks) Depleted Below Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) a'Indicators of hydropphobic vegetation and wetland hydrology must be present. unless disturbed or problematic. Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 150A, 150B) anomalous Bright Loamy Soils (F20) (MLRA 149A) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7)									
Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histoc Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A, B Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T) Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Organic Bodies (A6) (LRR P, T, U) X Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Z Redox Depressions (F8) Very Shallow Dark Surface (TF12) Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) other (Explain in Remarks) Incm-Manganese Masses (F12) (LRR O, P, T) Indicators of hydropphobic vegetation and wetland hydrology must be present. unless disturbed or problematic. Sandy Mucky Mineral (S1) (LRR O, S) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Bardy Rucky Sinface (S7) (LRR P,	Гуре: C=Con	centration, D=Depletion,	RM=Reduce	ed Matrix, MS=Maske	ed Sand Grains.			² Location:	PL=Pore Lining, M=Matrix.
Dark Surface (S7) (LRR P, S, T, U)	Histosol (Histic Ep Black His Stratified Organic I 5 cm Muc Depleted Thick Da Coast Pr Sandy M Sandy G Sandy R	(A1) ipedon (A2) stic (A3) n Sulfide (A4) I Layers (A5) Bodies (A6) (LRR P, T, U cky Mineral (A7) (LRR P esence (A8) (LRR U) ck (A9) (LRR P, T) I Below Dark Surface (A1 rk Surface (A12) airie Redox (A16) (MLR lucky Mineral (S1) (LRR leyed Matrix (S4) edox (S5)	1) ; T, U) 1) A 150A)	Polyvalue B Thin Dark S Loamy Mucl Loamy Gley Depleted Ma X Redox Dark Depleted Da Redox Depr Marl (F10) Depleted Oa Iron-Mangar Umbric Surf Delta Ochric Reduced Ve Piedmont Fl	elow Surface (S8) urface (S9) (LRF ky Mineral (F1) (L ed Matrix (F2) atrix (F3) Surface (F6) ark Surface (F7) essions (F8) (LRR U) chric (F11) (MLRA nese Masses (F12) ace (F13) (LRR I c (F17) (MLRA 1 critic (F18) (MLRA oodplain Soils (F12)	S, T, U RR O) (LRR 7, T, U) (1) 150A, 9) (ML) O, P, T) 150B) RA 149A	1 cm Muck 2 cm Muck Reduced V Piedmont I Anomalous (MLRA 15 Red Paren Very Shalk Other (Exp ³ Indicators of wetland I unless di	k (A9) (LRR O) k (A10) (LRR S) /ertic (F18) (outside MLRA 150A,B Floodplain Soils (F19) (LRR P, S, T) s Bright Loamy Soils (F20) 3B) tt Material (TF2) pw Dark Surface (TF12) olain in Remarks) of hydropphobic vegetation and hydrology must be present.
Depth (inches): Hydric Soil Present? Yes X No	estrictive La	ayer (if present):	0)						

Project/Site:	REDI Arkansas	City/Cou	nty: Homan Township, Texa	rkana, Miller Count	Sampling Date: 03/0	2/2021
Applicant/Owner:	AR-TX RE					_/_0_1 DP-1
Investigator(s):	Roger Willis	Section,	Township, Range:			
Landform (hillslope, terrace, etc):			ief (concave, convex, none):	none	Slope (%):	0
Subregion (LRR or MLRA):			3.532974 Long:		Datum: W	
Soil Map Unit Name:	Billyhaw clay, 0 to 1 perc			NWI classification		
Are climatic / hydrologic conditions o				, explain in Remarks.		
	, or Hydrologysigr			ircumstances" presen	,	lo
	, or Hydrology nat			lain any answers in R		
SUMMARY OF FINDINGS - /				•	,	
Hydrophytic Vegetation Present?	Yes No		,	<i>,</i> ,	,	
Hydric Soil Present?	Yes No		Is the Sampled Area			
Wetland Hydrology Present?	Yes No		within a Wetland?	Yes	No X	
Weildhe Hydrology Fresent:				105		
Remarks:						
High precipitation in	preceding weeks.					
HYDROLOGY						J
Wetland Hydrology Indicators:						
Primary Indicators (minimum of or	e required: check all that apply)		Secondary Indicate	ors (minimum of two requ	uired)
Surface Water (A1)	• • • • •	, ic Fauna (B13)		Surface Soil (•	<u></u>
High Water Table (A2)		Deposits (B15) (L	.RR U)		etated Concave Surface	(B8)
Saturation (A3)		gen Sulfide Odor	-	Drainage Pat		()
Water Marks (B1)		-	along Living Roots (C3)	Moss Trim Lir		
Sediment Deposits (B2)		nce of Reduced Ir			Vater Table (C2)	
Drift Deposits (B3)			in Tilled Soils (C6)	Crayfish Burr	. ,	
Algal Mat or Crust (B4)		Muck Surface (C7)	. ,	·	sible on Aerial Imagery (0	.9)
Iron Deposits (B5)		(Explain in Rema	,	Geomorphic F		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Inundation Visible on Aerial Ir				Shallow Aquit		
Water-Stained Leaves (B9)				FAC-Neutral	. ,	
					oss (D8) (LRR T, U)	
Field Observations:						
Surface Water Present?		th (inches):				
Water Table Present?		th (inches):				
Saturation Present?	Yes <u>No X</u> Dept	th (inches):	Wetland Hy	drology Present?	Yes No	Х
(includes capillary fringe)						
Describe Recorded Data (stream	nauge monitoring well aerial pl	hotos previous in	spection) if available.			
	Judgo, monitoring won, donar pr	lotoo, proviouo iri				
Remarks:						

VEGETATION (Four Strata) Ilso scientific nam of plant

VEGETATION (Four Strata) - Use scientific names	s of plant	s.			Sam	oling Poin	t: <u>U</u> E)P-1
Tree Stratum (Plot size:r=30') 1.	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test w Number of Domina That Are OBL, FAC	nt Species		0	(A)
1. 2. 3.				Total Number of Do				_
4.				Species Across All	Strata:		2	(B)
5 6 7			- <u> </u>	Percent of Dominar That Are OBL, FAC	·		0.0	_ (A/B)
8.				Prevalence Index	worksheet:			
	0	-		Total % Cover	of:	Mu	Iltiply by:	
50% of total cover: 0	20% (of total cover:	0	OBL species	0	x 1 =	0	
Sapling/Shrub Stratum (Plot size:)				FACW species	0	x 2 =	0	
1				FAC species	0	x 3 =	0	
2				FACU species	60	x 4 =	240	
3				UPL species	160	x 5 =	800	
4				Column Totals:	220	(A)	1040	(B)
56.							4 70	
				Prevalence Ir	1dex = B/A =		4.73	
7 8				Hydrophytic Vege	tation Indica	ators:		
	0	= Total Cov		1 - Rapid Test			ation	
50% of total cover: 0		of total cover:		2 - Dominance	• • •		ation	
Herb Stratum (Plot size: 1 square meter)				3 - Prevalence				
1. <i>Medicago minima /</i> Small bur clover, Burclover	100	Yes	UPL	Problematic H		enetation	(Explain)	
2. Cynodon dactylon / Bermuda grass	60	Yes	FACU			ogotation	(Explain)	
3. Festuca versuta / Texas fescue	40	No	UPL	¹ Indicators of hydrid	soil and we	tland hvd	roloav mus	t
4. <i>Physalis heterophylla</i> / Clammy groundcherry	20	No	UPL	be present, unless		-		
						probloma		
<u> </u>				Definitions of Fou	r Vegetatior	Strata:		
7								
0				Tree – Woody plan	ts, excluding	vines, 3 i	in. (7.6 cm)	or
0				more in diameter a	breast heig	ht (DBH),	regardless	of
10				height.				
11								
12.				Sapling/Shrub – V	loody plants	, excludin	g vines, les	s
·	220	= Total Cov		than 3 in. DBH and	greater than	3.28 ft (1	l m) tall.	
50% of total cover: 110		of total cover:			-			
Woody Vine Stratum (Plot size: r=20')	20700			Herb – All herbace	ous (non-wo	ody) plani	ts, regardle	SS
1.				of size, and woody	plants less t	han 3.28 t	ft tall.	
2.					•			
				Woody vine – All v	voodv vines	areater th	an 3.28 ft i	n
3.				height.	, , , , , , , , , , , , , , , , , , ,	0		
4								
5		- Tet-1 0		Hydrophytic				
500/ 51 1	0	= Total Cov		Vegetation				
50% of total cover: 0	20% (of total cover:	0	Present?	Yes	No	Х	
Permarka (if absorved, list marphalagical adaptions below)								

Remarks (if observed, list morphological adaptions below).

S	O	II.	

Depth	Matrix		Redox Features				_			
(inches)	Color (moist)	%	Color (moist)		Type ¹	Loc ²	Texture	Remarks		
0-18	7.5YR 4/4	95	7.5YR 6/8	5	С	M	clay			
		<u> </u>								
¹ Type: C=Co	ncentration, D=Depletio	on, RM=Redu	ced Matrix, MS=Mas	ked Sand Grai	ns.		² Location: P	L=Pore Lining, M=Matrix.		
Hydric Soil I	ndicators: (Applicable	e to all LRRs	, unless otherwise	noted.)			Indicators for Pr	roblematic Hydric Soils ³ :		
Histosol	()		Polyvalue Below Surface (S8) (LRR S, T, U)				1 cm Muck (A9) (LRR O)			
·	pipedon (A2)		Thin Dark Surface (S9) (LRR S, T, U)				2 cm Muck (A10) (LRR S)			
	istic (A3)		Loamy Mucky Mineral (F1) (LRR O)				Reduced Vertic (F18) (outside MLRA 150A,B			
, ,	en Sulfide (A4)		Loamy Gleyed Matrix (F2)				Piedmont Floodplain Soils (F19) (LRR P, S, T)			
	d Layers (A5)		Depleted Matrix (F3)				Anomalous Bright Loamy Soils (F20)			
	Bodies (A6) (LRR P, T		Redox Dark Surface (F6)				(MLRA 153B)			
5 cm Mucky Mineral (A7) (LRR P, T, U)		Depleted Dark Surface (F7)				Red Parent Material (TF2)				
Muck Presence (A8) (LRR U)		Redox Depressions (F8)				Very Shallow Dark Surface (TF12)				
1 cm Muck (A9) (LRR P, T)		Marl (F10) (LRR U)				Other (Explain in Remarks)				
Deplete	d Below Dark Surface (A11)	Depleted (Ochric (F11) (M	ILRA 151)				
Thick Dark Surface (A12)		Iron-Manganese Masses (F12) (LRR O, P, T)				³ Indicators of hydropphobic vegetation and				
Coast Prairie Redox (A16) (MLRA 150A)		Umbric Surface (F13) (LRR P, T, U)				wetland hydrology must be present.				
Sandy Mucky Mineral (S1) (LRR O, S)		Delta Ochric (F17) (MLRA 151)				unless disturbed or problematic.				
Sandy G	Gleyed Matrix (S4)		Reduced \	/ertic (F18) (M	ILRA 150	A, 150B)				
Sandy F	Redox (S5)		Piedmont	Floodplain Soils	s (F19) (ILRA 149A)			
Stripped	Matrix (S6)		Anomalou	s Bright Loamy	Soils (F2	20) (MLRA	149A, 153C, 153D)			
Dark Su	rface (S7) (LRR P, S,	T, U)								
Restrictive L	₋ayer (if present):									
Type:										
Depth (in	iches):						Hydric Soil Present	? Yes No X		
Remarks:										
Project/Site:	REDI Arkansas		City/Cour	nty: Homan T	ſownship, Texar	rkana, Miller Count	Sampling E	Date:	03/02/2021	
---	----------------------------	--------------------------------	-------------	-----------------	-----------------	----------------------------	-------------	-----------	-------------	
Applicant/Owner:		-TX REDI	-				Sampling P		T1DP1	
Investigator(s):	Roger Willis		Section,	Township, Ra	nge:					
Landform (hillslope, terrace, etc):	field		Local reli	ef (concave,	convex, none):	none		Slope (%	6): 0	
Subregion (LRR or MLRA):		Lat:	33	.531082	Long:	-93.898774		Datum:	WGS 1984	
Soil Map Unit Name:	Bossier cla	ay, 0 to 1 perc	ent slopes	3		NWI classificatio	n:	Non-we	etland	
Are climatic / hydrologic conditions o					X (If no	, explain in Remarks	s.)			
Are Vegetation, Soil						rcumstances" prese		es X	No	
	, or Hydrology					lain any answers in	,			
SUMMARY OF FINDINGS -	Attach site map she	owing sam	pling p	oint locati	ons, transe	cts, important f	eatures,	etc.		
Hydrophytic Vegetation Present?	Yes	No X								
Hydric Soil Present?	Yes		_	Is the Sam	pled Area					
Wetland Hydrology Present?	Yes	No X	_	within a We	etland?	Yes	No	Х		
Remarks: High precipitation in p	preceding weeks.									
HYDROLOGY										
Wetland Hydrology Indicators:										
Primary Indicators (minimum of on	e required: check all that	apply)				Secondary Indica	tors (minim	um of two	required)	
Surface Water (A1)		Aquatic Fauna	a (B13)			Surface Soil	Cracks (B6	i)		
High Water Table (A2)		Marl Deposits				Sparsely Ve			face (B8)	
Saturation (A3)		Hydrogen Sul		. ,		Drainage Pa)		
Water Marks (B1)		Oxidized Rhiz			Roots (C3)	Moss Trim L	. ,	(20)		
Sediment Deposits (B2)		Presence of F		. ,	(20)	Dry-Season		∍ (C2)		
Drift Deposits (B3)		Recent Iron R			(C6)	Crayfish Bur	. ,			
Algal Mat or Crust (B4) Iron Deposits (B5)		Thin Muck Su Other (Explain	. ,			Saturation V Geomorphic		-	ery (Ce)	
Inundation Visible on Aerial Ir				rksj		Shallow Aqu		2)		
Water-Stained Leaves (B9)						FAC-Neutral	. ,			
						Sphagnum n		LRR T. U)	
									/	
Field Observations:										
Surface Water Present?	Yes <u>No X</u>		· ·							
Water Table Present?	Yes <u>No X</u>		·		March and the					
Saturation Present?	Yes NoX	Depth (inche	es):		Wetland Hyd	drology Present?	Yes		No <u>X</u>	
(includes capillary fringe)										
Describe Recorded Data (stream o	jauge, monitoring well, a	erial photos, p	revious ins	spection), if a	vailable:					
Remarks:										
									İ	

VEGETATION (Four Strata) - Use scientific names			Sam	pling Point	t: <u>T1</u>	DP1		
<u>Tree Stratum</u> (Plot size:r=30') 1	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Number of Domina That Are OBL, FA	ant Species		0	(A)
2. 3. 4.				Total Number of D Species Across A			2	(B)
5. 6. 7.				Percent of Domina That Are OBL, FA			0.0	(A/B)
8.				Prevalence Index	worksheet:			
		= Total Cov		Total % Cove	ər of:	Mu	ltiply by:	
50% of total cover: 0	20% d	of total cover:	0	OBL species	0	x 1 =	0	
Sapling/Shrub Stratum (Plot size: r=20')				FACW species	0	x 2 =	0	
1				FAC species	10	x 3 =	30	
2				FACU species	100	x 4 =	400	
3				UPL species	115	x 5 =	575	
4			<u> </u>	Column Totals:	225	(A)	1005	(B)
5				-		_ ` / _		
6				Prevalence	Index = B/A =	:	4.47	
7								
8				Hydrophytic Veg	etation Indic:	ators:		
	0	= Total Cov	er	1 - Rapid Tes	t for Hydroph	ytic Vegeta	ation	
50% of total cover: 0	20% c	of total cover:	0	2 - Dominanc	ce Test is >50°	%		
Herb Stratum (Plot size: <u>1 square meter</u>)				3 - Prevalenc	e Index ≤3.0¹			
1. Cynodon dactylon / Bermuda grass	100	Yes	FACU	Problematic H	-lydrophytic V	egetation ¹	(Explain)	
2. Festuca versuta / Texas fescue	100	Yes	UPL					
3. Physalis heterophylla / Clammy groundcherry	15	No	UPL	¹ Indicators of hydr	ic soil and we	atland hydr	rology mus	t
4. Ranunculus fascicularis / Early buttercup	10	No	FAC	be present, unless	disturbed or	problema	tic.	
5								
6.				Definitions of Fo	ur Vegetatior	n Strata:		
7								
8.				Tree – Woody pla	-			
9.				more in diameter a	at breast heig	ht (DBH),	regardless	of
10				height.				
11.								
12.				Sapling/Shrub –	Woody plants	, excludin	g vines, les	s
	225	= Total Cov	er	than 3 in. DBH an	d greater thar	າ 3.28 ft (1	m) tall.	
50% of total cover: 112		of total cover:						
Woody Vine Stratum (Plot size: r=20')				Herb – All herbac	eous (non-wo	ody) plant	ts, regardle	SS
1.				of size, and wood	y plants less t	han 3.28 f	ft tall.	
0								
3.				Woody vine – All	woody vines	greater th	an 3.28 ft i	n
4.				height.	-	•		
5	0	- Total Carr		Hydrophytic				
		= Total Cov		Vegetation				
50% of total cover: 0	20%0	of total cover:	0	Present?	Yes	No	Х	
Pomarka (if observed, list morphological adoptions below)								

Depth	Matrix			x Features						
(inches)	Color (moist)	%	Color (moist)	% Туре	¹ Loc ²	Texture	Remarks			
0-16	5YR 4/4	100				sandy clay				
		·				·				
		·								
		·								
		·				·				
¹ Type: C=Coi	ncentration, D=Depletic	on, RM=Redu	ced Matrix, MS=Mas	sked Sand Grains.		² Location: P	L=Pore Lining, M=Matrix.			
-	ndicators: (Applicable	e to all LRRs					oblematic Hydric Soils ³ :			
Histosol	()		*	Below Surface (S8)	• • • •		A9) (LRR O)			
	pipedon (A2)			Surface (S9) (LRR			A10) (LRR S)			
	Black Histic (A3) Loamy Mucky Mineral (F1) (LRF						rtic (F18) (outside MLRA 150A,B)			
	Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Matrix (F3)						oodplain Soils (F19) (LRR P, S, T)			
	,	. 10		()			Bright Loamy Soils (F20)			
	Bodies (A6) (LRR P, T ucky Mineral (A7) (LRF			rk Surface (F6) Dark Surface (F7)		(MLRA 153B) Red Parent Material (TF2)				
	resence (A8) (LRR U)	(F, I, U)		pressions (F8)		Very Shallow Dark Surface (TF12)				
	uck (A9) (LRR P, T)) (LRR U)		Other (Explain in Remarks)				
	d Below Dark Surface (A11)		Ochric (F11) (MLRA	151)					
·	ark Surface (A12)	,,,,,,		anese Masses (F12)	•	³ Indicators of	hydropphobic vegetation and			
	rairie Redox (A16) (M I	LRA 150A)		urface (F13) (LRR P,			drology must be present.			
	Mucky Mineral (S1) (LF			ric (F17) (MLRA 151		,	urbed or problematic.			
	Gleyed Matrix (S4)		Reduced	Vertic (F18) (MLRA	, 150A, 150B)		•			
	Redox (S5)		Piedmont	Floodplain Soils (F19) (MLRA 149	A)				
Stripped	d Matrix (S6)		Anomalou	s Bright Loamy Soils	(F20) (MLRA	149A, 153C, 153D)				
Dark Su	Inface (S7) (LRR P, S,	T, U)	_							
Restrictive L	_ayer (if present):									
Туре:										
Depth (in	nches):					Hydric Soil Present	? Yes <u>No X</u>			
Remarks:										

Project/Site:	REDI Arkansas	City/County: Homan Township, Texar	kana, Miller Count Sampling E	Date: 03/02/2021
	AR-TX REDI		tate: Arkansas Sampling P	
Investigator(s):	Roger Willis	Section, Township, Range:		
Landform (hillslope, terrace, etc):		Local relief (concave, convex, none):	concave	Slope (%): 3
Subregion (LRR or MLRA):		-		Datum: WGS 1984
Soil Map Unit Name:	Bossier clay, 0 to 1 per	cent slopes	NWI classification:	Non-wetland
Are climatic / hydrologic conditions o	on the site typical for this time of year?	Yes NoX (If no,	, explain in Remarks.)	
			rcumstances" present? Yes	es X No
Are Vegetation, Soil	, or Hydrologynaturally p	problematic? (If needed, expl	lain any answers in Remarks.)	
SUMMARY OF FINDINGS -	Atta <u>ch site map showing san</u>	npling point locations, transed	cts, important features,	etc.
Hydrophytic Vegetation Present?	Yes X No			
Hydric Soil Present?	Yes X No			
Wetland Hydrology Present?	Yes X No		Yes X No	
Remarks: High precipitation in p	preceding weeks.	I		
HYDROLOGY				
Wetland Hydrology Indicators:				
Primary Indicators (minimum of on	1 111		Secondary Indicators (minimu	. , _
X Surface Water (A1)	Aquatic Faur	. ,	Surface Soil Cracks (B6	,
High Water Table (A2)		is (B15) (LRR U)	Sparsely Vegetated Con	
Saturation (A3)		ulfide Odor (C1)	Drainage Patterns (B10))
Water Marks (B1)		izospheres along Living Roots (C3)	Moss Trim Lines (B16)	(20)
Sediment Deposits (B2)	—	Reduced Iron (C4)	Dry-Season Water Table	∋ (C2)
X Drift Deposits (B3)		Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)	······································
X Algal Mat or Crust (B4)	Thin Muck Si		Saturation Visible on Ae	/
Iron Deposits (B5) Inundation Visible on Aerial Ir	· · · · · · · · · · · · · · · · ·	in in Remarks)	Geomorphic Position (D: Shallow Aquitard (D3)	2)
Water-Stained Leaves (B9)			FAC-Neutral Test (D5)	
			Sphagnum moss (D8) (I	LRR T. U)
Field Observations:				
	Yes X No Depth (inch			
	Yes No X Depth (inch	,		
Saturation Present?	Yes <u>No X</u> Depth (inch	ies): Wetland Hyd	drology Present? Yes	X No
(includes capillary fringe)				
Describe Recorded Data (stream o	gauge, monitoring well, aerial photos, p	previous inspection), if available:		
Remarks:				

VEGETATION (Four Strata) - Use scientific names		Sampling Point: WDP-2						
				Dominance Test worl	ksheet:			
	Absolute	Dominant	Indicator	Number of Dominant S				
Tree Stratum (Plot size: r=30')	% Cover	Species?	Status	That Are OBL, FACW,			3	(A)
1. <i>Ulmus crassifolia /</i> Cedar elm	15	Yes	FAC	,				
2				Total Number of Domir	nant			
3				Species Across All Stra			4	(B)
4					ata.		•	_ (0)
5				Percent of Dominant S	necies			
6				That Are OBL, FACW,	•		75.0	(A/B)
7				That AIC ODE, I AOW,	01170.		75.0	_ (7,0)
8				Prevalence Index wo	rksheet:			
	15			Total % Cover of:		Mu	ultiply by:	
50% of total cover: 7	20% (of total cover	3	OBL species	20	x 1 =	20	
Sapling/Shrub Stratum (Plot size: r=20')				FACW species	0	x 2 =	0	
1	<u> </u>			FAC species	50	x 3 =	150	
2				FACU species		x 4 =	80	
3				UPL species		x 5 =	0	
4.				Column Totals:		(A)	250	(B)
5						()	200	(=)
6.				Prevalence Inde	x = B/A =		2.78	
7.							2.70	
8.				Hydrophytic Vegetati	on Indicat	tors:		
	0	= Total Cov	er	1 - Rapid Test for	Hydrophyt	ic Veget	ation	
50% of total cover: 0	20%	of total cover	0	X 2 - Dominance Te	st is >50%			
Herb Stratum (Plot size: 1 square meter)				X 3 - Prevalence Inc	dex ≤3.0¹			
1. Ranunculus fascicularis / Early buttercup	30	Yes	FAC	Problematic Hydro	ophytic Ve	getation	¹ (Explain)	
2. Cynodon dactylon / Bermuda grass	20	Yes	FACU					
3. <i>Ludwigia peploides /</i> Marsh purslane	20	Yes	OBL	¹ Indicators of hydric so	bil and wetl	and hyd	rology mus	st
4. Rumex crispus / Curly dock	5	No	FAC	be present, unless dist	urbed or p	roblema	itic.	
5								
6.				Definitions of Four Ve	egetation	Strata:		
7.								
8.				Tree – Woody plants, e	excluding v	/ines, 3	in. (7.6 cm) or
9.				more in diameter at bre	east height	t (DBH),	regardless	s of
10				height.				
11.								
12.				Sapling/Shrub - Woo	dy plants, o	excludin	ig vines, le	SS
	75	= Total Cov	er	than 3 in. DBH and gre	eater than 3	3.28 ft (1	1 m) tall.	
50% of total cover: 37		of total cover						
Woody Vine Stratum (Plot size: r=20')				Herb – All herbaceous	(non-woo	dy) plan	ts, regardle	ess
1,				of size, and woody pla	nts less tha	an 3.28 ⁻	ft tall.	
2.								
3.				Woody vine – All woo	dy vines gr	reater th	an 3.28 ft	in
				height.				
4 5.								
· ·	0	= Total Cov	or	Hydrophytic				
50% of total cover: 0		Total Cov		Vegetation				
	20/00		0	Present?	Yes X	No		
				1				

S	O	11	

Depth Matrix		Features						
(inches) Color (moist) %	Color (moist)	% Type ¹	Loc ²	Texture	Remarks			
0-18 7.5YR 4/4 85	10YR 6/8	15 C	М	clay				
· ·	<u> </u>							
	<u> </u>							
· ·								
¹ Type: C=Concentration, D=Depletion, RM=R	educed Matrix, MS=Maske	ed Sand Grains.		² Location: F	PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applicable to all Li	RRs, unless otherwise no	oted.)		Indicators for F	Problematic Hydric Soils ³ :			
Histosol (A1)	Polyvalue B	elow Surface (S8) (LF	RR S, T, U)	1 cm Muck	(A9) (LRR O)			
Histic Epipedon (A2)	Thin Dark St	urface (S9) (LRR S, 1	r, U)	2 cm Muck	(A10) (LRR S)			
Black Histic (A3)	Loamy Mucl	ky Mineral (F1) (LRR	0)	Reduced V	ertic (F18) (outside MLRA 150A,B)			
Hydrogen Sulfide (A4)	Loamy Gley	ed Matrix (F2)		Piedmont F	loodplain Soils (F19) (LRR P, S, T)			
Stratified Layers (A5)	Depleted Ma	atrix (F3)		Anomalous	Bright Loamy Soils (F20)			
Organic Bodies (A6) (LRR P, T, U)	Redox Dark	Surface (F6)		(MLRA 153B)				
5 cm Mucky Mineral (A7) (LRR P, T, U)	Depleted Da	ark Surface (F7)		Red Parent Material (TF2)				
Muck Presence (A8) (LRR U)	X Redox Depr	essions (F8)		Very Shallow Dark Surface (TF12)				
1 cm Muck (A9) (LRR P, T)	Marl (F10)	(LRR U)		Other (Explain in Remarks)				
Depleted Below Dark Surface (A11)	Depleted Oc	chric (F11) (MLRA 151	1)					
Thick Dark Surface (A12)	Iron-Mangar	nese Masses (F12) (LF	rr o, p, t)	³ Indicators of	hydropphobic vegetation and			
Coast Prairie Redox (A16) (MLRA 1504	A) Umbric Surf	ace (F13) (LRR P, T, I	U)	wetland h	ydrology must be present.			
Sandy Mucky Mineral (S1) (LRR O, S)	Delta Ochric	: (F17) (MLRA 151)		unless dis	sturbed or problematic.			
Sandy Gleyed Matrix (S4)	Reduced Ve	rtic (F18) (MLRA 150)A, 150B)					
Sandy Redox (S5)	Piedmont Fl	oodplain Soils (F19) (I	MLRA 149A	.)				
Stripped Matrix (S6)	Anomalous	Bright Loamy Soils (F2	20) (MLRA '	149A, 153C, 153D)				
Dark Surface (S7) (LRR P, S, T, U)								
Restrictive Layer (if present):								
<u> </u>								
Restrictive Layer (if present):				Hydric Soil Presen	t? Yes <u>X</u> No			

Project/Site:	REDI Arkansas		City/Cou	nty: Homan T	ownship, Texar	kana, Miller Count	Sampling D	Date: 03/02/2021
Applicant/Owner:		-TX REDI					Sampling P	
Investigator(s):	Roger Willis		Section,	Township, Ra	nge:			
Landform (hillslope, terrace, etc):	field		Local reli	ief (concave,	convex, none):	convex		Slope (%): 1
Subregion (LRR or MLRA):		Lat:	33	8.535901	Long:	-93.900171		Datum: WGS 1984
Soil Map Unit Name:	Bossier cla	ay, 0 to 1 perc	cent slopes	3		NWI classificatio	n:	Non-wetland
Are climatic / hydrologic conditions o			-		X (If no,	, explain in Remarks	s.)	
Are Vegetation, Soil						cumstances" prese		s X No
	, or Hydrology					ain any answers in		
SUMMARY OF FINDINGS - A	Attach site map she	owing sam	pling p	oint locati	ons, transeo	cts, important f	ieatures,	etc.
Hydrophytic Vegetation Present?	Yes	No X						
Hydric Soil Present?	Yes		_	Is the Sam	pled Area			
Wetland Hydrology Present?	Yes	No X	_	within a We	etland?	Yes	No	X
Remarks: High precipitation in p	preceding weeks.		ı					
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of on	e required: check all that	apply)				Secondary Indica	itors (minimι	um of two required)
Surface Water (A1)		Aquatic Fauna	a (B13)			Surface Soil	, ,	,
High Water Table (A2)		Marl Deposits					-	icave Surface (B8)
Saturation (A3)		Hydrogen Sul		. ,		Drainage Pa		ł
Water Marks (B1)		Oxidized Rhiz			Roots (C3)	Moss Trim L	. ,	(20)
Sediment Deposits (B2)		Presence of F		()	(00)	Dry-Season		; (C2)
Drift Deposits (B3)		Recent Iron R			(C6)	Crayfish Bur	. ,	
Algal Mat or Crust (B4) Iron Deposits (B5)		Thin Muck Su Other (Explain	. ,	,		Geomorphic		rial Imagery (C9) 2)
Inundation Visible on Aerial Ir				rksj		Shallow Aqu		2)
Water-Stained Leaves (B9)						FAC-Neutral	, ,	
,						Sphagnum n		LRR T. U)
						· -		
Field Observations:								
Surface Water Present?	Yes <u>No X</u>		·					
Water Table Present?	Yes <u>No X</u> Yes <u>No X</u>		·		Wetland Hyd	Brocont?	Voc	No V
Saturation Present?	Yes <u>No X</u>	Depth (inche	es):		Wetland Hyu	Irology Present?	Yes	No <u>X</u>
(includes capillary fringe)								
Describe Recorded Data (stream g	gauge, monitoring well, a	erial photos, p	revious ins	spection), if a	vailable:			
Remarks:								

VEGETATION (Four Strata) - Use scientific name		Sampling Point:U				
				Dominance Test worksheet:		
	Absolute	Dominant	Indicator	Number of Dominant Species		
Tree Stratum (Plot size: r=30')	% Cover	Species?	Status	That Are OBL, FACW, or FAC:	1	(A)
1. <i>Ulmus crassifolia /</i> Cedar elm	15	Yes	FAC		·	
2				Total Number of Dominant		
3					0	
4				Species Across All Strata:	2	(B)
5.						
				Percent of Dominant Species		
7			·	That Are OBL, FACW, or FAC:	50.0	(A/B)
			·			
8		- Total Cav		Prevalence Index worksheet:		
	15	-		Total % Cover of:	Multiply	by:
50% of total cover: 7	20% (of total cover:	3	OBL species 0 x	1 =	0
Sapling/Shrub Stratum (Plot size: r=20')				FACW species 0 x	2 =	0
1			. <u> </u>	FAC species 30 x	3 = 9	90
2				FACU species 100 x	4 = 4	.00
3				· · · · · · · · · · · · · · · · · · ·		00
4.				· · · · · · · · · · · · · · · · · · ·		90 (B)
5.					-) <u> </u>	(B)
<u> </u>				Dravalar as ladar D/A	0.00	
				Prevalence Index = B/A =	3.93	
78.			·	Hydrophytic Vegetation Indicator		
ö	0	= Total Cove				
		-		1 - Rapid Test for Hydrophytic	vegetation	
	20% (of total cover:	0	2 - Dominance Test is >50%		
Herb Stratum (Plot size: <u>1 square meter</u>)				3 - Prevalence Index ≤3.0 ¹		
1. Cynodon dactylon / Bermuda grass	100	Yes	FACU	Problematic Hydrophytic Vege	tation ¹ (Exp	olain)
2. Medicago minima / Small bur clover, Burclover	20	No	UPL			
3. Ranunculus fascicularis / Early buttercup	10	No	FAC	¹ Indicators of hydric soil and wetlan	nd hydrology	y must
4. <i>Rumex crispus /</i> Curly dock	5	No	FAC	be present, unless disturbed or pro	blematic.	
5						
6				Definitions of Four Vegetation St	irata:	
7.						
8.				Tree – Woody plants, excluding vin	nes, 3 in. (7.	6 cm) or
0				more in diameter at breast height (I	DBH), regar	dless of
			·	height.		
10				Ũ		
11			·	Sapling/Shrub – Woody plants, ex	cludina vine	es less
12				than 3 in. DBH and greater than 3.2	-	
	135	= Total Cove		than 5 m. DBh and greater than 5.2	20 11 (1 11) 18	an.
50% of total cover: 67	20% (of total cover:	27		.)	
Woody Vine Stratum (Plot size: r=20')				Herb – All herbaceous (non-woody		
1				of size, and woody plants less than	i 3.28 ft tall.	
2.						
3.				Woody vine – All woody vines grea	ater than 3.2	28 ft in
4.			·	height.		
5.			·			
·	0	= Total Cove		Hydrophytic		
E00/ of total action		-		Vegetation		
50% of total cover: 0	20% (of total cover:	0	Present? Yes	No >	x

Profile Desc Depth	ription: (Describe to th Matrix	ne depth need		ne indicator or confirr x Features	n the abser	nce of indicators.)		
(inches)	Color (moist)	%	Color (moist)	% Type¹	Loc ²	Texture	Remark	S
0-16	10YR 4/4	100	. ,			sandy clay		
¹ Type: C=Co	ncentration, D=Depletion	n, RM=Reduce	d Matrix, MS=Mas	ked Sand Grains.		² Location	: PL=Pore Lining, M	=Matrix.
Hydric Soil I	Indicators: (Applicable	to all LRRs, u	Inless otherwise I	noted.)		Indicators for	Problematic Hydr	ic Soils³:
Histosol				Below Surface (S8) (L	RR S, T, U)		k (A9) (LRR O)	
	pipedon (A2)			Surface (S9) (LRR S,			k (A10) (LRR S)	
	istic (A3)			cky Mineral (F1) (LRR			Vertic (F18) (outsid	le MLRA 150A.B)
	en Sulfide (A4)			yed Matrix (F2)	,		Floodplain Soils (F	
	d Layers (A5)		Depleted N	• • • •			us Bright Loamy Soi	
	Bodies (A6) (LRR P, T,	U)	<u> </u>	k Surface (F6)		(MLRA 1	0 ,	(-)
	ucky Mineral (A7) (LRR			Dark Surface (F7)		•	nt Material (TF2)	
	resence (A8) (LRR U)	, , -,	<u> </u>	pressions (F8)			low Dark Surface (1	F12)
	uck (A9) (LRR P, T)			(LRR U)			plain in Remarks)	,
	d Below Dark Surface (A	A11)		Dchric (F11) (MLRA 15	1)		, ,	
·	ark Surface (A12)	,	·	anese Masses (F12) (L		³ Indicators	of hydropphobic ve	petation and
	rairie Redox (A16) (ML	.RA 150A)		rface (F13) (LRR P, T,			hydrology must be	
	Mucky Mineral (S1) (LR			ic (F17) (MLRA 151)	- /		listurbed or problem	•
	Gleyed Matrix (S4)	- / - /		/ertic (F18) (MLRA 15	0A. 150B)			
	Redox (S5)			Floodplain Soils (F19)		۹)		
	d Matrix (S6)			s Bright Loamy Soils (F				
	Irface (S7) (LRR P, S, 1	r. u)				,,		
	(), (<u>-</u> , (-, , , , , , , , , , , , , , , , , ,	., -,						
Restrictive L	Layer (if present):							
Туре:								
Depth (in	nches):					Hydric Soil Prese	ent? Yes	No X
Remarks:								

Project/Site:	REDI Arkansas	City/County: Homan	Township, Texarkar	na, Miller Count	Sampling D	ate: 03/02/2021
Applicant/Owner:				e: Arkansas		
Investigator(s):	Roger Willis	Section, Township, Ra	ange:			
Landform (hillslope, terrace, etc):	pasture	Local relief (concave,	convex, none):	concave	9	Slope (%): 1
Subregion (LRR or MLRA):	LRR P Lat:	33.535549	Long:	-93.896232	2	Datum: WGS 1984
Soil Map Unit Name:		ercent slopes		NWI classificatio	n:	Non-wetland
Are climatic / hydrologic conditions o	on the site typical for this time of year?	? Yes No	X (If no, ex	xplain in Remark	s.)	
Are Vegetation, Soil	, or Hydrologysignificar	ntly disturbed?	Are "Normal Circui	mstances" prese	nt? Yes	s X No
Are Vegetation, Soil	, or Hydrologynaturally	problematic?	(If needed, explain	n any answers in	Remarks.)	
SUMMARY OF FINDINGS - A	Attach site map showing sa	mpling point locati	ions, transects	s, important f	features,	etc.
Hydrophytic Vegetation Present?	Yes No X					
Hydric Soil Present?	Yes X No		pled Area			
Wetland Hydrology Present?	Yes X No			Yes	No	Х
Remarks: High precipitation in	nreceding weeks					
	preceding weeks.					
HYDROLOGY						
Wetland Hydrology Indicators:						
Primary Indicators (minimum of or	ne required: check all that apply)		ę	Secondary Indica	tors (minimu	um of two required)
X Surface Water (A1)	X Aquatic Fau	una (B13)		Surface Soil		· · · · · · · · · · · · · · · · · · ·
High Water Table (A2)		its (B15) (LRR U)	-		• • •	cave Surface (B8)
Saturation (A3)	Hydrogen S	Sulfide Odor (C1)	-	Drainage Pa	- itterns (B10)	
Water Marks (B1)		hizospheres along Living	Roots (C3)	Moss Trim L		
Sediment Deposits (B2)		f Reduced Iron (C4)	. , _	Dry-Season	Water Table	(C2)
Drift Deposits (B3)	Recent Iron	Reduction in Tilled Soils	- (C6)	Crayfish Bur		· · /
X Algal Mat or Crust (B4)	Thin Muck S	Surface (C7)	_		• •	rial Imagery (C9)
Iron Deposits (B5)		ain in Remarks)	-	Geomorphic		
X Inundation Visible on Aerial II		,	-	Shallow Aqu	itard (D3)	,
Water-Stained Leaves (B9)	/		-	FAC-Neutral	Test (D5)	
			=	Sphagnum r		_RR T, U)
			<u> </u>			
Field Observations:						
Surface Water Present?		ches): 2				
Water Table Present?	Yes No X Depth (inc	,			.,	
Saturation Present?	Yes <u>No X</u> Depth (inc	hes):	Wetland Hydro	logy Present?	Yes	<u>X</u> No
(includes capillary fringe)						
Describe Recorded Data (stream	gauge, monitoring well, aerial photos,	previous inspection), if a	available:			
	J	F				
Remarks:						

Strata) IIa o sciontifi finlant

/EGETATION (Four Strata) - Use scientific name			Sam	pling Poir	nt: <u>W</u>	DP-3		
Tree Stratum (Plot size:r=30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Number of Domina That Are OBL, FAG	ant Species		1	(A)
2				Total Number of D Species Across All			2	(B)
4. 5. 6. 7.	_			Percent of Domina That Are OBL, FA0	•		50.0	_ (A/B)
8.		= Total Cov		Prevalence Index				
E0% of total assess	-	-		Total % Cove	r of:	M	ultiply by:	
50% of total cover: 0	20% (of total cover	:0	OBL species	0	x 1 = _	0	
Sapling/Shrub Stratum (Plot size: r=20')				FACW species	0	x 2 =	0	
1				FAC species	70	x 3 =	210	
2				FACU species	40	x 4 =	160	
3				UPL species	0	x 5 =	0	
4				Column Totals:	110	(A)	370	(B)
5								
6				Prevalence I	Index = B/A =	:	3.36	
7								
8				Hydrophytic Vege	atation Indic	ators:		
	0	= Total Cov	er	1 - Rapid Test	t for Hydroph	ytic Vege	tation	
50% of total cover:0	20% (of total cover	: 0	2 - Dominance	e Test is >50	%		
Herb Stratum (Plot size: <u>1 square meter</u>)				3 - Prevalence	e Index ≤3.0¹			
1. Ranunculus fascicularis / Early buttercup	70	Yes	FAC	Problematic H	lydrophytic V	egetation	¹ (Explain)	
2. Cynodon dactylon / Bermuda grass	40	Yes	FACU					
3.				¹ Indicators of hydri	ic soil and we	etland hyd	drology mu	st
4.				be present, unless	disturbed or	problema	atic.	
5.						•		
6.				Definitions of Fou	ur Vegetation	n Strata:		
7								
8				Tree – Woody plar	nts, excluding	y vines, 3	in. (7.6 cm) or
0				more in diameter a	at breast heig	ht (DBH),	, regardles	s of
				height.				
10				-				
11				Sapling/Shrub – \	Noodv plants	. excludir	na vines. le	SS
12		= Total Cov		than 3 in. DBH and				
	110	-			5	(,	
50% of total cover: 55	20% (of total cover:	: 22	Herb – All herbace	ous (non-wo	odv) plan	nts regardle	ess
Woody Vine Stratum (Plot size: r=20')				of size, and woody			-	
1					planto lebo l	.nan 0.20	n tan.	
2				Woody vine – All	woody vinos	areator th	oon 2 20 ft	in
3				-	woody vines	greater ti	1an 3.20 it	
4				height.				
5				Hydrophytic				
	0	= Total Cov	er	Vegetation				
50% of total cover: 0	20% (of total cover	0	Present?	Yee	Nz	» <u>Х</u>	
Remarks (if absorved, list merphological adaptions below)								

S	O	11	

Depth	Matrix		Redox	Features							
(inches)	Color (moist)	%	Color (moist)	<u>%</u> T	ype¹	Loc ²	Texture	Remarks			
0-16	10YR 4/3	75	7.5YR 4/6	25	С	М	clay				
		<u> </u>		<u> </u>							
		·		<u> </u>							
				·							
¹ Type: C=Co	ncentration, D=Depletio	n, RM=Reduo	ced Matrix, MS=Mask	ed Sand Grains.			² Location:	PL=Pore Lining, M=Matrix.			
•	Indicators: (Applicable	to all LRRs,						Problematic Hydric Soils ³ :			
Histosol	()			elow Surface (S			1 cm Muck (A9) (LRR O)				
Histic Epipedon (A2) Thin Dark Surface (S9)				Surface (S9) (LF	RR S, T	, U)	2 cm Muc	k (A10) (LRR S)			
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O)					D)	Reduced \	Vertic (F18) (outside MLRA 150A,B)				
Hydroge	en Sulfide (A4)		Loamy Gley	/ed Matrix (F2)			Piedmont	Floodplain Soils (F19) (LRR P, S, T)			
Stratifie	d Layers (A5)		Depleted M	Depleted Matrix (F3)				Anomalous Bright Loamy Soils (F20)			
Organic	Bodies (A6) (LRR P, T,	U)	Redox Dark	Redox Dark Surface (F6) (MLRA 153B)							
5 cm Mi	ucky Mineral (A7) (LRR	P, T, U)	Depleted Da	ark Surface (F7)			Red Parent Material (TF2) Very Shallow Dark Surface (TF12)				
	resence (A8) (LRR U)		X Redox Depi	()							
	uck (A9) (LRR P, T)		 Marl (F10)	()	Other (Explain in Remarks)						
	d Below Dark Surface (A	A11)	` ` `	chric (F11) (MLF	RA 151)					
·	ark Surface (A12)	,	·	· / ·			³ Indicators o	of hydropphobic vegetation and			
	rairie Redox (A16) (ML	DA 150A)		Iron-Manganese Masses (F12) (LRR O, P, T) ³ Indicators of hydropphobic veg Umbric Surface (F13) (LRR P, T, U) ^{vetland} hydrology must be p				hydrology must be present.			
	· / ·)					
	Mucky Mineral (S1) (LR	R 0, 5)		c (F17) (MLRA	•	4 4 5 9 5 1	uniess ai	isturbed or problematic.			
	Gleyed Matrix (S4)			ertic (F18) (MLF							
	Redox (S5)			loodplain Soils (I	<i>,</i> .						
	d Matrix (S6)		Anomalous	Bright Loamy So	oils (F2	0) (MLRA	149A, 153C, 153D)				
Dark Su	Irface (S7) (LRR P, S, 1	r, U)									
Restrictive L	_ayer (if present):										
Туре:											
Depth (in	nches):						Hydric Soil Prese	nt? Yes X No			
Remarks:											

Project/Site:	REDI Arkansas	City/Co	unty: Homan T	ownship, Texark	kana, Miller Count	Sampling D	Date: 03/02/2021	
Applicant/Owner:	AR-TX I	·				Sampling P		
Investigator(s):	Roger Willis	Section	ı, Township, Raı	nge:				
Landform (hillslope, terrace, etc):	pasture	Local re	elief (concave, d	convex, none):	none		Slope (%): 0	
Subregion (LRR or MLRA):	LRR P	Lat: 3	33.535479	Long:	-93.896253	í	Datum: WGS 198	4
Soil Map Unit Name:		0 to 1 percent slop	es		NWI classificatio	n:	Non-wetland	
Are climatic / hydrologic conditions o				X (If no,	explain in Remarks	s.)		
Are Vegetation, Soil					cumstances" preser		s X No	
	, or Hydrologyn				ain any answers in I			
SUMMARY OF FINDINGS - /	Attach site map showi	ing sampling r	point location	ons, transec	ts, important f	eatures,	etc.	
Hydrophytic Vegetation Present?	Yes No	р <u>Х</u>						
Hydric Soil Present?	Yes No		Is the Sam	pled Area				
Wetland Hydrology Present?	Yes No	» <u> </u>	within a We	etland?	Yes	No	X	
Remarks: High precipitation in p	preceding weeks.							
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of on	e required: check all that app	oly <u>)</u>			Secondary Indica	tors (minim	um of two required)	_
Surface Water (A1)	Aqu	uatic Fauna (B13)			Surface Soil		,	-
High Water Table (A2)		rl Deposits (B15) (-	icave Surface (B8)	
Saturation (A3)		lrogen Sulfide Odo	. ,		Drainage Pa		ļ	
Water Marks (B1)		dized Rhizosphere		Roots (C3)	Moss Trim Li	. ,	(20)	
Sediment Deposits (B2)		sence of Reduced	()	(00)	Dry-Season		; (C2)	
Drift Deposits (B3)		cent Iron Reduction		(C6)	Crayfish Bur	()		
Algal Mat or Crust (B4) Iron Deposits (B5)		n Muck Surface (C er (Explain in Rem			Geomorphic		rial Imagery (C9) 2)	
Inundation Visible on Aerial Ir			ansj		Shallow Aqui		2)	
Water-Stained Leaves (B9)					FAC-Neutral	. ,		
					Sphagnum n		LRR T. U)	
			ſ				· ·	
Field Observations:								
		epth (inches):						
		epth (inches):		Watland Hyd	lamy Bracont?	Voc	No. Y	
	Yes <u>No X</u> De	epth (inches):		Wetland Hyur	rology Present?	Yes	No <u>X</u>	
(includes capillary fringe)								
Describe Recorded Data (stream g	jauge, monitoring well, aerial	photos, previous i	nspection), if av	vailable:				
Remarks:								
								ļ

VEGETATION (Four Strata) - Use scientific names	s of plant	s.		Sampling Point: UDP-3	
				Dominance Test worksheet:	
	Absolute	Dominant	Indicator	Number of Dominant Species	
Tree Stratum (Plot size: r=30')	% Cover	Species?	Status	That Are OBL, FACW, or FAC: 0 (A)	
1. Carya illinoinensis / Pecan	65	Yes	FACU		
2				Total Number of Dominant	
3				Total Number of Dominant	
4.				Species Across All Strata:3 (B)	
5.					
				Percent of Dominant Species	
7			·	That Are OBL, FACW, or FAC: 0.0 (A/	B)
7					
8		Tatal Oas	<u> </u>	Prevalence Index worksheet:	
	65	_		Total % Cover of: Multiply by:	
50% of total cover: <u>32</u>	20%	of total cover:	13	OBL species 0 x 1 = 0	
Sapling/Shrub Stratum (Plot size: r=20')				FACW species 0 x 2 = 0	
1		<u> </u>	<u></u>	FAC species $20 \times 3 = 60$	
2				FACU species 165 x 4 = 660	
3.				$\frac{1}{100} \frac{1}{100} \frac{1}$	
4.				· · · · · · · · · · · · · · · · · · ·	
E				Column Totals: <u>245</u> (A) <u>1020</u> ((B)
0					
				Prevalence Index = B/A = 4.16	
7				Underschutte Verstetien Indianterer	
8			·	Hydrophytic Vegetation Indicators:	
	0	= Total Cove		1 - Rapid Test for Hydrophytic Vegetation	
	20%	of total cover:	0	2 - Dominance Test is >50%	
Herb Stratum (Plot size: <u>1 square meter</u>)				3 - Prevalence Index ≤3.0 ¹	
1. Cynodon dactylon / Bermuda grass	100	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)	
2. Physalis heterophylla / Clammy groundcherry	40	Yes	UPL		
3. Medicago minima / Small bur clover, Burclover	20	No	UPL	¹ Indicators of hydric soil and wetland hydrology must	
4. Ranunculus fascicularis / Early buttercup	20	No	FAC	be present, unless disturbed or problematic.	
5.					
6.				Definitions of Four Vegetation Strata:	
7.			·		
			· . <u></u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or	
0			·	more in diameter at breast height (DBH), regardless of	
				height.	
10	- <u> </u>		·		
11				Sapling/Shrub – Woody plants, excluding vines, less	
12			·	than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
	180	= Total Cove	er	than 5 m. DBH and greater than 5.26 m (1 m) tail.	
50% of total cover: 90	20%	of total cover:	36		
Woody Vine Stratum (Plot size: r=20')				Herb – All herbaceous (non-woody) plants, regardless	
1				of size, and woody plants less than 3.28 ft tall.	
2.		-			
3.				Woody vine - All woody vines greater than 3.28 ft in	
4.			·	height.	
				-	
5		T-1 1 0		Hydrophytic	
	0	= Total Cove		Vegetation	
50% of total cover: 0	20%	of total cover:	0	Present? Yes No X	

S	O	11	

(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	7.5YR 3/1	100					clay	
3-18	7.5YR 4/4	100					clay	
Type: C=Co	ncentration, D=Depletion	n, RM=Reduced	Matrix, MS=Mas	ked Sand Gra	ains.		² Location: P	L=Pore Lining, M=Matrix.
ydric Soil I	Indicators: (Applicable	to all LRRs, ur	less otherwise	noted.)			Indicators for Pr	oblematic Hydric Soils ³ :
Histosol	l (A1)		Polyvalue	Below Surfac	e (S8) (LR	R S, T, U)	1 cm Muck (A9) (LRR O)
Histic E	pipedon (A2)		Thin Dark	Surface (S9)	(LRR S, T	, U)	2 cm Muck (A10) (LRR S)
Black H	istic (A3)		Loamy Mu	cky Mineral (F1) (LRR (D)	Reduced Ve	rtic (F18) (outside MLRA 150
Hydroge	en Sulfide (A4)		Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils					
Stratified Layers (A5)			Depleted N	Matrix (F3)			Anomalous	Bright Loamy Soils (F20)
Organic	Bodies (A6) (LRR P, T,	U)	Redox Da	rk Surface (Fe	6)		(MLRA 153)	3)
5 cm Mu	ucky Mineral (A7) (LRR	P, T, U)	Depleted [Dark Surface	(F7)		Red Parent	Material (TF2)
Muck Pr	resence (A8) (LRR U)		Redox De	pressions (F8	5)		Very Shallow	v Dark Surface (TF12)
1 cm Mu	uck (A9) (LRR P, T)		Marl (F10)	(LRR U)			Other (Expla	in in Remarks)
Deplete	d Below Dark Surface (A	A11)	Depleted 0	Ochric (F11)	(MLRA 151)		
Thick Da	ark Surface (A12)		Iron-Mang	anese Masse	es (F12) (LR	R O, P, T)	³ Indicators of	hydropphobic vegetation and
Coast P	rairie Redox (A16) (ML	.RA 150A)		rface (F13)		J)	wetland hy	drology must be present.
_ `	Mucky Mineral (S1) (LR	R O, S)		ric (F17) (ML			unless dist	urbed or problematic.
_ `	Gleyed Matrix (S4)			/ertic (F18)	•			
_ `	Redox (S5)			Floodplain Sc	· /·			
	d Matrix (S6)		Anomalou	s Bright Loam	ny Soils (F2	0) (MLRA '	149A, 153C, 153D)	
Dark Su	Irface (S7) (LRR P, S, 1	r, U)						
estrictive L	Layer (if present):							
Туре:								
Depth (in	nches):		_				Hydric Soil Present	? Yes <u>No</u>
lemarks:								

Project/Site:	REDI Arkansas	City/	County: Homan	Township, Texark	ana, Miller Count	Sampling Dat	e: 03/02/2021
Applicant/Owner:		TX REDI			te: Arkansas		
Investigator(s):	Roger Willis	Secti	on, Township, Ra	ange:			
Landform (hillslope, terrace, etc):	pasture	Loca	l relief (concave,	convex, none):	concave	s S	lope (%): 0
Subregion (LRR or MLRA):		Lat:		Long:	-93.896061	D	atum: WGS 1984
Soil Map Unit Name:		am, 0 to 1 percent s	opes		NWI classificatio	n: I	Non-wetland
Are climatic / hydrologic conditions of	on the site typical for this ti	me of year? Yes	No	X (If no, o	explain in Remarks	s.)	
Are Vegetation, Soil	, or Hydrology	significantly distu	rbed?	Are "Normal Circ	umstances" preser	nt? Yes	X No
	, or Hydrology			(If needed, explai	in any answers in I	Remarks.)	
SUMMARY OF FINDINGS -				ions, transec	ts, important f	eatures, et	t c .
Hydrophytic Vegetation Present?	Yes X	No					
Hydric Soil Present?	Yes	No X	Is the San	npled Area			
Wetland Hydrology Present?	Yes X		within a W		Yes	No	х
Remarks:							
High precipitation in	preceaing weeks.						
HYDROLOGY							
Wetland Hydrology Indicators:							
Primary Indicators (minimum of or	ne required: check all that	apply)			Secondary Indica	tors (minimum	of two required)
X Surface Water (A1)		Aquatic Fauna (B13	5)		Surface Soil	Cracks (B6)	
High Water Table (A2)	ı	Marl Deposits (B15)	(LRR U)		Sparsely Veg	getated Conca	ave Surface (B8)
Saturation (A3)	I	Hydrogen Sulfide O	dor (C1)		Drainage Pa	tterns (B10)	
Water Marks (B1)	(Oxidized Rhizosphe	res along Living	Roots (C3)	Moss Trim Li	ines (B16)	
Sediment Deposits (B2)		Presence of Reduce	ed Iron (C4)		Dry-Season	Water Table (0	C2)
Drift Deposits (B3)	ı	Recent Iron Reduct	ion in Tilled Soils	s (C6)	Crayfish Bur	rows (C8)	
X Algal Mat or Crust (B4)	— .	Thin Muck Surface	(C7)		Saturation Vi	isible on Aeria	I Imagery (C9)
Iron Deposits (B5)	(Other (Explain in Re	emarks)			Position (D2)	
X Inundation Visible on Aerial I	magery (B7)				Shallow Aqu	itard (D3)	
Water-Stained Leaves (B9)					FAC-Neutral	Test (D5)	
—					Sphagnum n	noss (D8) (LR	(R T, U)
Field Observations:				T			
Surface Water Present?	Yes X No	Depth (inches):	3				
Water Table Present?	Yes No	· · · -					
Saturation Present?	Yes No X	Depth (inches):		Wetland Hydr	rology Present?	Yes X	No
(includes capillary fringe)			·	Wettand Hydr	ology i lesent:		
(includes capillary inlige)							
Describe Recorded Data (stream	gauge, monitoring well, ae	rial photos, previou	s inspection), if a	available:			
Remarks:							
Remarks.							

ur Strata) I leo sciontific finlant V

/EGETATION (Four Strata) - Use scientific names	s of plant	s.		Sampling Point: WDP-4
Tree Stratum (Plot size: r=30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
1				
3.				Total Number of Dominant
4.				Species Across All Strata: 1 (B)
5				Percent of Dominant Species
6				
7				That Are OBL, FACW, or FAC: 100.0 (A/B)
8	<u> </u>	<u> </u>		Prevalence Index worksheet:
	0	= Total Cove	r	Total % Cover of: Multiply by:
50% of total cover: 0	20% (of total cover:	0	OBL species 0 $x 1 = 0$
Sapling/Shrub Stratum (Plot size: r=20')				FACW species 10 x 2 = 20
1				FAC species 45 x 3 = 135
2				FACU species 0 x 4 = 0
3				UPL species $0 \times 5 = 0$
4.				Column Totals: 55 (A) 155 (B)
5.				
6.				Prevalence Index = B/A = 2.82
7.				
8.				Hydrophytic Vegetation Indicators:
	0	= Total Cove	r	1 - Rapid Test for Hydrophytic Vegetation
50% of total cover: 0	20% (of total cover:	0	X 2 - Dominance Test is >50%
Herb Stratum (Plot size: 1 square meter)				X 3 - Prevalence Index ≤3.0 ¹
1. Ranunculus fascicularis / Early buttercup	35	Yes	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Paspalum bifidum / Pitchfork crown grass	10	No	FACW	
3. Rumex crispus / Curly dock	10	No	FAC	¹ Indicators of hydric soil and wetland hydrology must
4.				be present, unless disturbed or problematic.
5.				
6.				Definitions of Four Vegetation Strata:
7.				
8.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
9.				more in diameter at breast height (DBH), regardless of
10.				height.
11.				
12.				Sapling/Shrub – Woody plants, excluding vines, less
	55	= Total Cove	r	than 3 in. DBH and greater than 3.28 ft (1 m) tall.
50% of total cover: 27		of total cover:	11	
Woody Vine Stratum (Plot size: r=20')				Herb – All herbaceous (non-woody) plants, regardless
1.				of size, and woody plants less than 3.28 ft tall.
2.				
3.				Woody vine – All woody vines greater than 3.28 ft in
4.				height.
5		- Total Case		Hydrophytic
F00/ -51-1-1 0	0	= Total Cove		Vegetation
50% of total cover: 0	20% (of total cover:	0	Present? Yes X No
Demonics (if show and list meanshale rise) adoutions helpsu)				

S	O	11	

(inches)	Color (moist)	%	Color (moist)	% Tv	vpe ¹ Loc	c ² Texture Remarks			
0-3	7.5YR 5/2	100			<u>po</u>	silty clay			
3-16	5YR 5/4	100				silty clay			
			-						
Туре: С=Со	ncentration, D=Depletion	on, RM=Redu	ced Matrix, MS=Mas	ked Sand Grains.		² Location: PL=Pore Lining, M=Matrix.			
lydric Soil I	ndicators: (Applicable	e to all LRRs	, unless otherwise	noted.)		Indicators for Problematic Hydric Soils ³ :			
Histosol	(A1)		Polyvalue	Below Surface (S8	B) (LRR S, T,	I , U) 1 cm Muck (A9) (LRR O)			
Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U				R S, T, U)	2 cm Muck (A10) (LRR S)				
Black Hi	Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O)				(LRR O)	Reduced Vertic (F18) (outside MLRA 150A			
Hydrogen Sulfide (A4)			Loamy Gle	eyed Matrix (F2)		Piedmont Floodplain Soils (F19) (LRR P, S,			
Stratified	d Layers (A5)		Depleted N	Matrix (F3)		Anomalous Bright Loamy Soils (F20)			
Organic	Bodies (A6) (LRR P, T	, U)	Redox Da	rk Surface (F6)		(MLRA 153B)			
5 cm Mu	icky Mineral (A7) (LRF	r p, t, u)	Depleted [Dark Surface (F7)		Red Parent Material (TF2)			
Muck Pr	esence (A8) (LRR U)		Redox De	pressions (F8)		Very Shallow Dark Surface (TF12)			
1 cm Mu	ıck (A9) (LRR P, T)		Marl (F10)	(LRR U)		Other (Explain in Remarks)			
Depleted	d Below Dark Surface (A11)	Depleted (Ochric (F11) (MLR	A 151)				
Thick Da	ark Surface (A12)		Iron-Mang	anese Masses (F1	2) (LRR O, P	P, T) ³ Indicators of hydropphobic vegetation and			
Coast P	rairie Redox (A16) (M	LRA 150A)	Umbric Su	rface (F13) (LRR	P, T, U)	wetland hydrology must be present.			
Sandy N	lucky Mineral (S1) (LF	RR O, S)	Delta Och	ric (F17) (MLRA 1	51)	unless disturbed or problematic.			
Sandy G	Bleyed Matrix (S4)		Reduced \	/ertic (F18) (MLR	A 150A, 150)B)			
Sandy F	Redox (S5)		Piedmont	Floodplain Soils (F	19) (MLRA 1	149A)			
Stripped	Matrix (S6)		Anomalou	s Bright Loamy So	ils (F20) (ML	LRA 149A, 153C, 153D)			
Dark Su	rface (S7) (LRR P, S,	T, U)							
Restrictive L	ayer (if present):								
Туре:									
Depth (in	ches):					Hydric Soil Present? Yes No X			
Remarks:									

Project/Site:	REDI Arkansas	City/Co	ounty: Homan ⁻	Township, Texarl	kana, Miller Count	Sampling D	Date: 03/02/2021
Applicant/Owner:	AR-TX F	,				Sampling P	
Investigator(s):	Roger Willis	Sectior	n, Township, Ra	ange:			
Landform (hillslope, terrace, etc):	pasture	Local r	elief (concave,	convex, none):	none		Slope (%): 0
Subregion (LRR or MLRA):	LRR P	Lat: 3	33.535406	Long:	-93.896011		Datum: WGS 1984
Soil Map Unit Name:		0 to 1 percent slop	pes		NWI classificatio	n:	Non-wetland
Are climatic / hydrologic conditions o				X (If no,	explain in Remarks	s.)	
Are Vegetation, Soil					cumstances" preser		s X No
	, or Hydrologyn				ain any answers in I	,	
SUMMARY OF FINDINGS - /	Attach site map showi	ng sampling	point locati	ons, transec	ts, important f	eatures,	etc.
Hydrophytic Vegetation Present?	Yes No	<u>x</u>					
Hydric Soil Present?	Yes No		Is the Sam	pled Area			
Wetland Hydrology Present?	Yes No	x	within a W	etland?	Yes	No	X
Remarks: High precipitation in p	preceding weeks.						
HYDROLOGY							
Wetland Hydrology Indicators:							
Primary Indicators (minimum of on	e required: check all that app	oly)			Secondary Indica	tors (minimι	um of two required)
Surface Water (A1)	Aqu	iatic Fauna (B13)			Surface Soil	· · /	,
High Water Table (A2)		l Deposits (B15)				-	icave Surface (B8)
Saturation (A3)		Irogen Sulfide Odo	. ,		Drainage Pa		ł
Water Marks (B1)		dized Rhizosphere		Roots (C3)	Moss Trim Li	. ,	(20)
Sediment Deposits (B2)		sence of Reduced	()	(00)	Dry-Season		: (C2)
Drift Deposits (B3)		ent Iron Reduction		(C6)	Crayfish Bur	()	
Algal Mat or Crust (B4) Iron Deposits (B5)		n Muck Surface (C er (Explain in Rem			Geomorphic		rial Imagery (C9)
Inundation Visible on Aerial Ir			larks)		Shallow Aqui		2)
Water-Stained Leaves (B9)	agery (Dr)				FAC-Neutral	• •	
					Sphagnum n		LRR T, U)
				1			. ,
Field Observations:	·· ·· · · ·	- <i>.</i>					
		epth (inches):					
		epth (inches):		Wetland Hyd	lamy Bracont?	Voc	No V
	Yes <u>No X</u> De	epth (inches):		Wetland Hyur	rology Present?	Yes	No <u>X</u>
(includes capillary fringe)							
Describe Recorded Data (stream g	jauge, monitoring well, aerial	photos, previous	inspection), if a	ıvailable:			
Remarks:							

VEGETATION (Four Strata) - Use scientific names	s of plant	s.		Sampling Point: UDP-4
				Dominance Test worksheet:
	Absolute	Dominant	Indicator	Number of Dominant Species
Tree Stratum (Plot size: r=30')	% Cover	Species?	Status	That Are OBL, FACW, or FAC: 0 (A)
1. Carya illinoinensis / Pecan	35	Yes	FACU	
2				Total Number of Dominant
3				
4				Species Across All Strata: <u>3</u> (B)
5				Descent of Demain and One size
6				Percent of Dominant Species
7				That Are OBL, FACW, or FAC: 0.0 (A/B)
8.		_		Prevalence Index worksheet:
	35	= Total Cove	er	Total % Cover of: Multiply by:
50% of total cover: 17	20%	of total cover:	7	$\frac{1}{\text{OBL species}} \qquad 0 \qquad \text{x 1} = 0$
Sapling/Shrub Stratum (Plot size: r=20')				· · · · · · · · · · · · · · · · · · ·
1,				FACW species 0 x 2 = 0
2				FAC species 5 $x = 15$
2				FACU species <u>145</u> x 4 = <u>580</u>
A				UPL species 75 x 5 = 375
4				Column Totals: <u>225</u> (A) <u>970</u> (B)
5				
6				Prevalence Index = B/A = 4.31
7				
8				Hydrophytic Vegetation Indicators:
	0	= Total Cove		 1 - Rapid Test for Hydrophytic Vegetation
50% of total cover: 0	20%	of total cover:	0	2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>1 square meter</u>)				3 - Prevalence Index ≤3.0 ¹
1. Cynodon dactylon / Bermuda grass	100	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Medicago minima / Small bur clover, Burclover	60	Yes	UPL	
3. <i>Festuca versuta /</i> Texas fescue	15	No	UPL	¹ Indicators of hydric soil and wetland hydrology must
4. Digitaria ciliaris / Southern crabgrass	10	No	FACU	be present, unless disturbed or problematic.
5. Rumex crispus / Curly dock	5	No	FAC	
6.				Definitions of Four Vegetation Strata:
7.				
8.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
0				more in diameter at breast height (DBH), regardless of
			·	height.
11 12.				Sapling/Shrub – Woody plants, excluding vines, less
12	190	= Total Cove		than 3 in. DBH and greater than 3.28 ft (1 m) tall.
E0% of total accurate		-		
50% of total cover: 95	20%	of total cover:	38	Herb – All herbaceous (non-woody) plants, regardless
Woody Vine Stratum (Plot size:r=20')				of size, and woody plants less than 3.28 ft tall.
1				
2				Woody vine – All woody vines greater than 3.28 ft in
3				• • •
4				height.
5				Hydrophytic
	0	= Total Cove	er	Vegetation
50% of total cover: 0	20%	of total cover:	0	-
				Present? Yes No X

Depth	Matrix		Redox	<pre>K Features</pre>					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Rema	arks
0-16	7.5YR 4/4	100					silty clay		
					·				
					·				
		·			·		,		
					·				
					·				
Type: C=Co	ncentration, D=Depletio	n, RM=Redu	ced Matrix, MS=Masl	ked Sand Gr	ains.		² Location:	: PL=Pore Lining,	M=Matrix.
hudria Sail I	ndicators: (Applicable		unloss othorwise r	notod)			Indicators for	Problematic Hy	dria Saila ³ :
Histosol			•	Below Surfac		RS T III		k (A9) (LRR O)	
	pipedon (A2)			Surface (S9)				k (A3) (LRR S)	
	istic (A3)			cky Mineral (side MLRA 150A,E
	en Sulfide (A4)			yed Matrix (I	. , .	-,		· / ·	(F19) (LRR P, S, T)
	d Layers (A5)		Depleted N		_/			is Bright Loamy S	
	Bodies (A6) (LRR P, T	, U)	·	k Surface (F	6)		(MLRA 1		、
-	ucky Mineral (A7) (LRR		Depleted D	ark Surface	(F7)		Red Pare	nt Material (TF2)	
Muck Pr	resence (A8) (LRR U)		Redox Dep	pressions (F8	3)		Very Shal	low Dark Surface	(TF12)
1 cm Mu	uck (A9) (LRR P, T)		Marl (F10)	(LRR U)			Other (Ex	plain in Remarks))
Deplete	d Below Dark Surface (A	A11)	Depleted C	Ochric (F11)	(MLRA 151)			
Thick Da	ark Surface (A12)		Iron-Manga	anese Masse	es (F12) (LR	R O, P, T)	³ Indicators	of hydropphobic \	vegetation and
Coast P	rairie Redox (A16) (MI	_RA 150A)	Umbric Sur	face (F13)	(LRR P, T, l	J)	wetland	hydrology must b	pe present.
Sandy N	/lucky Mineral (S1) (LF	RR O, S)	Delta Ochr	ic (F17) (ML	_RA 151)		unless o	listurbed or proble	ematic.
Sandy C	Gleyed Matrix (S4)		Reduced V	ertic (F18)	(MLRA 150	A, 150B)			
Sandy F	Redox (S5)			loodplain Se	· / ·				
	l Matrix (S6)		Anomalous	Bright Loan	ny Soils (F2	0) (MLRA	149A, 153C, 153D)		
Dark Su	rface (S7) (LRR P, S,	T, U)							
Restrictive L	₋ayer (if present):								
Туре:									
Depth (in	iches):						Hydric Soil Prese	ent? Yes	No <u>X</u>
Remarks:									
tomanto.									

Project/Site:	REDI Arkansas	City/County: Homan	Township, Tex;	arkana, Miller Count	Sampling Date:	03/02/2021
Applicant/Owner:	AR-TX REDI			State: Arkansas	Sampling Point:	T2DP1
Investigator(s):	Roger Willis	Section, Township, Ra			· · ·	
Landform (hillslope, terrace, etc):	pasture	Local relief (concave,	convex, none)): none	Slope	e (%): 0
Subregion (LRR or MLRA):		33.538028			Datur	m: WGS 1984
Soil Map Unit Name:	Rilla silt loam, 0 to 1 p	ercent slopes		NWI classificatio	n: Non	-wetland
Are climatic / hydrologic conditions	on the site typical for this time of year?	Yes No	X (lfn	no, explain in Remarks	3.)	
Are Vegetation, Soil	, or Hydrologysignificar	itly disturbed?	Are "Normal C	Circumstances" preser	nt? Yes 2	X No
Are Vegetation, Soil	, or Hydrologynaturally	problematic?	(If needed, ex	plain any answers in I	Remarks.)	
SUMMARY OF FINDINGS	- Attach site map showing sa	mpling point locati	ions, transo	ects, important f	eatures, etc.	
Hydrophytic Vegetation Present	? Yes No X					
Hydric Soil Present?	Yes No X		npled Area			
Wetland Hydrology Present?	Yes No X	within a W	-	Yes	<u>No X</u>	
Remarks: High precipitation in	ו preceding weeks.	I				
HYDROLOGY						
Wetland Hydrology Indicators						
	one required: check all that apply)			Secondary Indica	tors (minimum of t	two required)
Surface Water (A1)	Aquatic Fau	na (B13)		Surface Soil	Cracks (B6)	, ,
High Water Table (A2)	Marl Depos	its (B15) (LRR U)		Sparsely Veg	getated Concave S	Surface (B8)
Saturation (A3)	Hydrogen S	ulfide Odor (C1)		Drainage Pa	tterns (B10)	
Water Marks (B1)	Oxidized Rh	nizospheres along Living	Roots (C3)	Moss Trim Li	ines (B16)	
Sediment Deposits (B2)	Presence of	f Reduced Iron (C4)		Dry-Season	Water Table (C2)	
Drift Deposits (B3)	Recent Iron	Reduction in Tilled Soils	; (C6)	Crayfish Bur	rows (C8)	
Algal Mat or Crust (B4)	Thin Muck \$	Surface (C7)		Saturation Vi	isible on Aerial Im	agery (C9)
Iron Deposits (B5)	Other (Expl	ain in Remarks)		Geomorphic	Position (D2)	
Inundation Visible on Aerial	Imagery (B7)			Shallow Aqu	itard (D3)	
Water-Stained Leaves (B9)				FAC-Neutral	Test (D5)	
				Sphagnum n	noss (D8) (LRR T	, U)
Field Observations:						
Surface Water Present?	Yes No X Depth (inc	hes) [.]				
Water Table Present?	Yes No X Depth (inc	,				
Saturation Present?	Yes No X Depth (inc	·	Wetland Hy	ydrology Present?	Yes	No X
(includes capillary fringe)			Wettanding	yurology i resent.	100	
(includes capitaly imige)						
Describe Recorded Data (strean	n gauge, monitoring well, aerial photos,	previous inspection), if a	available:			
Remarks:						

/EGETATION (Four Strata) - Use scientific nam	es of plant	s.			Sam	pling Point	t: <u>T2</u>	DP1
<u>Tree Stratum</u> (Plot size:r=30') 1	Absolute <u>% Cover</u>	Dominant Species?	Indicator Status	Dominance Test Number of Domina That Are OBL, FA0	ant Species		0	_ (A)
2. 3. 4.				Total Number of De Species Across All			2	_ (B)
5. 6. 7.				Percent of Domina That Are OBL, FA0	•		0.0	_ (A/B)
8.		= Total Cov		Prevalence Index	worksheet:			
EOO/ aftetal acuan		-		Total % Cove	er of:	Mu	ltiply by:	
· · · · · · · · · · · · · · · · · · ·) 20% (of total cover:	0	OBL species	0	x 1 =	0	
Sapling/Shrub Stratum (Plot size: r=20')				FACW species	0	x 2 =	0	
1				FAC species	15	x 3 =	45	
2				FACU species	60	x 4 =	240	
3				UPL species	70	x 5 =	350	
4				Column Totals:	145	(A)	635	(B)
5 6.								
				Prevalence I	Index = B/A =		4.38	
7 8.				Hydrophytic Vege	etation Indic	ators.		
8	0	= Total Cov		1 - Rapid Test			ation	
50% of total cover: 0		of total cover:		2 - Dominance	• •			
Herb Stratum (Plot size: 1 square meter)	20700			3 - Prevalence				
	60	Vee	EACU				(Evalaia)	
1. <u>Cynodon dactylon / Bermuda grass</u>	60	Yes	FACU	Problematic H	ayarophytic v	egetation	(Explain)	
2. Festuca versuta / Texas fescue	60	Yes						
3. <u>Ranunculus fascicularis / Early buttercup</u>	15	No	FAC	¹ Indicators of hydri		-		st
4. Medicago minima / Small bur clover, Burclover	10	No	UPL	be present, unless	s disturbed or	problema	tic.	
5 6.				Definitions of Fou	ur Vegetatio	n Strata:		
7								
				Tree – Woody plar	nts. excluding	vines. 3 i	n. (7.6 cm)) or
8				more in diameter a				
9				height.		(,		
10				g.m.				
11				Sapling/Shrub – \	Woody plants	excluding	n vines les	22
12				than 3 in. DBH and				55
	145	= Total Cov			a greater that	10.20 11 (1	m) tan.	
50% of total cover: 7	<u>2</u> 20% o	of total cover:	29	Herb – All herbace	oous (non wa	ody) plant	e regardie	
Woody Vine Stratum (Plot size: r=20')				of size, and woody		• • •	-	:55
1				or size, and woody	/ plants less t	11an 3.20 I	l lall.	
2							0 00 # :	
3				Woody vine – All	woody vines	greater the	an 3.28 π I	n
4				height.				
5				Hydrophytic				
	0	= Total Cov	er	Vegetation				
50% of total cover:0	20% (of total cover:	0	Present?	Yes	No	x	
					100			
Demonstra (if charge and list many balancian adaptions balance)								

Depth (inchos)	Matrix Color (moist)	%	Color (moist)	x Features % Type ¹	Loc ²	Texture	Rema	-ko
(inches) 0-16	7.5YR 4/4	100		% Type ¹		sandy clay	Remai	KS
		·						
	·							
Туре: С=Со	ncentration, D=Depletion	on, RM=Reduce	ed Matrix, MS=Mas	ked Sand Grains.		² Location:	PL=Pore Lining, I	M=Matrix.
lydric Soil I	ndicators: (Applicabl	e to all LRRs, ι	Inless otherwise	noted.)		Indicators for	Problematic Hyd	ric Soils³:
Histosol	(A1)		Polyvalue	Below Surface (S8) (LF	RR S, T, U)	1 cm Mucl	(A9) (LRR O)	
Histic Ep	pipedon (A2)		Thin Dark	Surface (S9) (LRR S, 1	Γ, U)	2 cm Mucl	(A10) (LRR S)	
Black Hi	istic (A3)		Loamy Mu	cky Mineral (F1) (LRR	O)	Reduced \	/ertic (F18) (outs	ide MLRA 150A,B)
Hydroge	en Sulfide (A4)		Loamy Gle	eyed Matrix (F2)		Piedmont	Floodplain Soils (I	F19) (LRR P, S, T)
Stratified	d Layers (A5)		Depleted I	Matrix (F3)		Anomalou	s Bright Loamy So	oils (F20)
	Bodies (A6) (LRR P, 1	. U)	 Redox Da	rk Surface (F6)		(MLRA 15		()
_ •	ucky Mineral (A7) (LRI			Dark Surface (F7)		•	t Material (TF2)	
	resence (A8) (LRR U)	,.,.,		pressions (F8)			ow Dark Surface ((TF12)
	uck (A9) (LRR P, T)			(LRR U)			lain in Remarks)	()
	d Below Dark Surface (Δ11)		Ochric (F11) (MLRA 151	n		iain in rionanio)	
·	ark Surface (A12)	,,,,,,		anese Masses (F12) (LI		³ Indicators of	f hydropphobic ve	agetation and
	rairie Redox (A16) (M			Inface (F13) (LRR P, T,			nydrology must be	0
				· · · · ·	0)		, ,,	•
-	Nucky Mineral (S1) (LF	RR 0, 5)		ric (F17) (MLRA 151)		uniess di	sturbed or proble	matic.
	Gleyed Matrix (S4)			/ertic (F18) (MLRA 150				
_ `	Redox (S5)			Floodplain Soils (F19) (I		•		
	l Matrix (S6) rface (S7) (LRR P, S,	T 11)	Anomalou	s Bright Loamy Soils (F2	20) (MLRA	149A, 153C, 153D)		
	(S7) (LKK P, S,	1, 0)						
	.ayer (if present):							
Type: Depth (in	iches):					Hydric Soil Prese	nt? Yes	No X
	· .					-		
Remarks:								

Project/Site:	REDI Arkansas	City/County: Homan Township, T	exarkana, Miller Count Sampling	Date: 03/02/2021
	AR-TX REDI			Point: T2DP2/WDP-5
Investigator(s):	Roger Willis	Section, Township, Range:		
Landform (hillslope, terrace, etc):	pasture	Local relief (concave, convex, nor	ne): none	Slope (%): 0
Subregion (LRR or MLRA):				Datum: WGS 1984
Soil Map Unit Name:	Bossier clay, 0 to 1 per	cent slopes	NWI classification:	Non-wetland
Are climatic / hydrologic conditions o	on the site typical for this time of year?	Yes NoX (1	If no, explain in Remarks.)	
Are Vegetation, Soil	, or Hydrologysignificant	ly disturbed? Are "Norma	al Circumstances" present? Ye	es X No
Are Vegetation, Soil	, or Hydrologynaturally p	problematic? (If needed,	explain any answers in Remarks.)	
SUMMARY OF FINDINGS -	Attach site map showing san	npling point locations, tran	sects, important features	, etc.
Hydrophytic Vegetation Present?	Yes X No			
Hydric Soil Present?	Yes X No			
Wetland Hydrology Present?	Yes X No		Yes X No	
		l		
Remarks: High precipitation in r	preceding weeks.			
HYDROLOGY				
Wetland Hydrology Indicators:				
Primary Indicators (minimum of or	e required: check all that apply)		Secondary Indicators (minim	num of two required)
X Surface Water (A1)	X Aquatic Faur	าa (B13)	Surface Soil Cracks (Be	·
High Water Table (A2)		s (B15) (LRR U)	Sparsely Vegetated Co	ncave Surface (B8)
Saturation (A3)	Hydrogen Sι	ılfide Odor (C1)	Drainage Patterns (B10))
Water Marks (B1)		zospheres along Living Roots (C3)	Moss Trim Lines (B16)	
Sediment Deposits (B2)		Reduced Iron (C4)	Dry-Season Water Tabl	ie (C2)
Drift Deposits (B3)	Recent Iron	Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)	
X Algal Mat or Crust (B4)	Thin Muck S		Saturation Visible on A	
Iron Deposits (B5)	Other (Expla	in in Remarks)	Geomorphic Position (02)
Inundation Visible on Aerial Ir	magery (B7)		Shallow Aquitard (D3)	
Water-Stained Leaves (B9)			X FAC-Neutral Test (D5)	
			Sphagnum moss (D8)	(LRR T, U)
Field Observations:				
Surface Water Present?	Yes X No Depth (inch	nes): 2		
Water Table Present?	Yes No X Depth (inch			
Saturation Present?	Yes No X Depth (inch	·	Hydrology Present? Yes	X No
(includes capillary fringe)		·		
Describe Recorded Data (stream g	gauge, monitoring well, aerial photos,	previous inspection), if available:		
Remarks:				

Sampling Point: T2DP2/WDP-5

Tree Stratum (Plot size:) 1				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 Total Number of Dominant Species Across All Strata: 2 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)
8.	0 20% d		0	Prevalence Index worksheet:Total % Cover of:Multiply by:OBL species75 $x 1 = 75$ FACW species25 $x 2 = 50$ FAC species15 $x 3 = 45$ FACU species0 $x 4 = 0$ UPL species0 $x 5 = 0$ Column Totals:115(A)Prevalence Index = B/A =1.48
7.	0 20% c 75 25 15	= Total Cove of total cover: Yes Yes No		Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index ≤3.01 Problematic Hydrophytic Vegetation1 (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5.				 Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding 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.
3. 4. 5. 50% of total cover: 0	0 20% c	= Total Cove		Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes X No

S	O	11	

(inches) Color (0-16 10Y 10Y Type: C=Concentration, Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2 Black Histic (A3) Hydrogen Sulfide (A Stratified Layers (A8 Organic Bodies (A6 5 cm Mucky Minera Muck Presence (A8 1 cm Muck (A9) (LF	R 3/1 90 D=Depletion, RM=F (Applicable to all L) .4)	RRs, unless oth Pc Th Lc Lc	A 6/8) Surface (S8) (L ee (S9) (LRR S , ineral (F1) (LRR	T, U)	Indicators 1 cm 2 cm		•	
ydric Soil Indicators: Histosol (A1) Histic Epipedon (A2 Black Histic (A3) Hydrogen Sulfide (A Stratified Layers (A4 Organic Bodies (A6 5 cm Mucky Minera Muck Presence (A8	(Applicable to all L) (4)	RRs, unless oth Pc Th Lc Lc	h erwise noted. olyvalue Below hin Dark Surfac oamy Mucky Mi) Surface (S8) (L ee (S9) (LRR S , ineral (F1) (LRR	T, U)	Indicators 1 cm 2 cm	for Problem Muck (A9) (I	atic Hydric Sc LRR O)	
ydric Soil Indicators: Histosol (A1) Histic Epipedon (A2 Black Histic (A3) Hydrogen Sulfide (A Stratified Layers (A4 Organic Bodies (A6 5 cm Mucky Minera Muck Presence (A8	(Applicable to all L) (4)	RRs, unless oth Pc Th Lc Lc	h erwise noted. olyvalue Below hin Dark Surfac oamy Mucky Mi) Surface (S8) (L ee (S9) (LRR S , ineral (F1) (LRR	T, U)	Indicators 1 cm 2 cm	for Problem Muck (A9) (I	atic Hydric Sc LRR O)	
Depleted Below Dar Thick Dark Surface Coast Prairie Redox Sandy Mucky Miner Sandy Gleyed Matri Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7)	(A7) (LRR P, T, U)) (LRR U) R P, T) k Surface (A11) (A12) c (A16) (MLRA 150 al (S1) (LRR O, S) x (S4)	A)	on-Manganese mbric Surface (elta Ochric (F1 educed Vertic (iedmont Floodp	(F3) ace (F6) urface (F7) ons (F8)	.RR O, P, T) U) 0A, 150B) (MLRA 1494	Piedr Anon (MLF Red I Very Other ³ Indica wet unle	nont Floodplai halous Bright L A 153B) Parent Materia Shallow Dark r (Explain in R tors of hydropp land hydrology ess disturbed o	18) (outside M in Soils (F19) (Loamy Soils (F al (TF2) Surface (TF12	(LRR P, S, T) 20)) tion and ent.
Restrictive Layer (if pre Type: Depth (inches):	sent):					Hydric Soil P	resent?	Yes X	No

Project/Site:	REDI Arkansas	City/County: Homan 1	Fownship, Texar	kana, Miller Count	Sampling Date:	10/20/2021
Applicant/Owner:	AR-TX REDI		St	tate: Arkansas	Sampling Point:	T2DP2/WDP-5
Investigator(s):	Roger Willis	Section, Township, Ra	inge:			
Landform (hillslope, terrace, etc):	pasture	Local relief (concave,	convex, none):	none	Slope	e (%): 0
Subregion (LRR or MLRA):					Datu	m: WGS 1984
Soil Map Unit Name:	Bossier clay, 0 to 1 per	rcent slopes		NWI classification	n: Non	n-wetland
Are climatic / hydrologic conditions of	on the site typical for this time of year?	Yes X No	(If no,	, explain in Remarks	s.)	
Are Vegetation, Soil	, or Hydrologysignifican	tly disturbed?	Are "Normal Cir	cumstances" preser	nt? Yes	X No
Are Vegetation, Soil	, or Hydrologynaturally	problematic?	(If needed, expl	ain any answers in F	Remarks.)	
SUMMARY OF FINDINGS - A	Attach site map showing sar	npling point locati	ons, transed	cts, important f	eatures, etc.	
Hydrophytic Vegetation Present?	Yes NoX					
Hydric Soil Present?	Yes X No	Is the Sam	pled Area			
Wetland Hydrology Present?	Yes NoX	within a W	etland?	Yes	No X	
Remarks:		I				
HYDROLOGY						
Wetland Hydrology Indicators:						
Primary Indicators (minimum of or	ne required: check all that apply)			Secondary Indicat	tors (minimum of	two required)
Surface Water (A1)	Aquatic Fau	na (B13)		Surface Soil		
High Water Table (A2)	Marl Deposi	ts (B15) (LRR U)		Sparsely Veç	getated Concave	Surface (B8)
Saturation (A3)	Hydrogen S	ulfide Odor (C1)		Drainage Pat	tterns (B10)	
Water Marks (B1)		izospheres along Living	Roots (C3)	Moss Trim Li	ines (B16)	
Sediment Deposits (B2)		Reduced Iron (C4)			Water Table (C2)	
Drift Deposits (B3)		Reduction in Tilled Soils	(C6)	Crayfish Buri		
Algal Mat or Crust (B4)	Thin Muck S	. ,			isible on Aerial Im	agery (C9)
Iron Deposits (B5)		ain in Remarks)			Position (D2)	
Inundation Visible on Aerial II Water-Stained Leaves (B9)	hagery (B7)			Shallow Aqui FAC-Neutral	. ,	
					noss (D8) (LRR 1	r u)
			r			, 0)
Field Observations:						
Surface Water Present?	Yes <u>No X</u> Depth (incl	,				
Water Table Present?	Yes <u>No X</u> Depth (incl	,				
Saturation Present?	Yes <u>No X</u> Depth (incl	nes):	Wetland Hyd	Irology Present?	Yes	No X
(includes capillary fringe)						
Describe Recorded Data (stream	gauge, monitoring well, aerial photos,	previous inspection), if a	vailable:			
Remarks:						

Sampling Point: T2DP2/WDP-5

	Absolute	Dominant	Indicator	Dominance Test worksheet: Number of Dominant Species		
Tree Stratum (Plot size:) 1.	% Cover	Species?	Status	That Are OBL, FACW, or FAC:	0	(A)
2.				Total Number of Dominant		
3				Species Across All Strata:	2	(B)
4 5				Percent of Dominant Species		
6				That Are OBL, FACW, or FAC:	0.0	(A/B)
7 8				Prevalence Index worksheet:		
	0	= Total Cove	er	Total % Cover of:	Multiply by:	
50% of total cover: 0	20% (of total cover:	0	OBL species 0 x	x 1 = 0	
Sapling/Shrub Stratum (Plot size: r=20')				FACW species 0 x	x 2 = 0	
1				FAC species 0 x	x 3 = 0	
2.				FACU species 95 x	x 4 = 380	
2				UPL species 70 x	x 5 = 350	
1				Column Totals: 165 (A	(A) 730	(B)
5.						
6				Prevalence Index = B/A =	4.42	_
7 8				Hydrophytic Vegetation Indicato		
···	0	= Total Cove		1 - Rapid Test for Hydrophytic	c Vegetation	
50% of total cover: 0		of total cover:	0	2 - Dominance Test is >50%		
Herb Stratum (Plot size: 1 square meter)	20703			3 - Prevalence Index ≤3.0 ¹		
	05	Vee	FACU	Problematic Hydrophytic Vege	etation ¹ (Explain)	
1. Cynodon dactylon / Bermuda grass		Yes	FACU			
2. Festuca versuta / Texas fescue	60	Yes		¹ Indicators of hydric soil and wetlar	nd hydrology mus	t
 <u>Torilis nodosa / Wild parsley, Short sock-destroyer</u> 4. 	10	No	UPL	be present, unless disturbed or pro	oblematic.	
_				Definitions of Four Venetation S		
5 6				Definitions of Four Vegetation S	otrata	
7.				Tree - Woody plants, excluding vin	nes 3 in (76 cm)	or
8.				more in diameter at breast height (
9.				height.	. , -	
10						
11.				Sapling/Shrub - Woody plants, ex		•
12.				than 3 in. DBH and greater than or		
	165	= Total Cove		tall.	· • • • • • • • • • • • • • • • • • • •	,
50% of total cover: 82	-	of total cover:	33			
	20703					
Woody Vine Stratum (Plot size: r=20') 1.				Herb - All herbaceous (non-woody size, and woody plants less than 3		ss of
2.	·					
3.		· · · · · · · · · · · · · · · · · · ·		· · · · · · · ·		
	·			Woody vines - All woody vines gre	reater than 3.28 ft	IN
4 5.				height.		
U		- Total Caur		Hydrophytic		
F00/ -{1-1-1	0	= Total Cove		Hydrophytic		
50% of total cover: 0	20% (of total cover:	0	Vegetation	N ₂ X	
				Present? Yes	NoX	

S	O	11	

(inches) Color (0-16 10Y 10Y Type: C=Concentration, Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2 Black Histic (A3) Hydrogen Sulfide (A Stratified Layers (A8 Organic Bodies (A6 5 cm Mucky Minera Muck Presence (A8 1 cm Muck (A9) (LF	R 3/1 90 D=Depletion, RM=F (Applicable to all L) .4)	RRs, unless oth Pc Th Lc Lc	A 6/8) Surface (S8) (L ee (S9) (LRR S , ineral (F1) (LRR	T, U)	Indicators 1 cm 2 cm		•	
ydric Soil Indicators: Histosol (A1) Histic Epipedon (A2 Black Histic (A3) Hydrogen Sulfide (A Stratified Layers (A4 Organic Bodies (A6 5 cm Mucky Minera Muck Presence (A8	(Applicable to all L) (4)	RRs, unless oth Pc Th Lc Lc	h erwise noted. olyvalue Below hin Dark Surfac oamy Mucky Mi) Surface (S8) (L ee (S9) (LRR S , ineral (F1) (LRR	T, U)	Indicators 1 cm 2 cm	for Problem Muck (A9) (I	atic Hydric So LRR O)	
ydric Soil Indicators: Histosol (A1) Histic Epipedon (A2 Black Histic (A3) Hydrogen Sulfide (A Stratified Layers (A4 Organic Bodies (A6 5 cm Mucky Minera Muck Presence (A8	(Applicable to all L) (4)	RRs, unless oth Pc Th Lc Lc	h erwise noted. olyvalue Below hin Dark Surfac oamy Mucky Mi) Surface (S8) (L ee (S9) (LRR S , ineral (F1) (LRR	T, U)	Indicators 1 cm 2 cm	for Problem Muck (A9) (I	atic Hydric So LRR O)	
Depleted Below Dar Thick Dark Surface Coast Prairie Redox Sandy Mucky Miner Sandy Gleyed Matri Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7)	(A7) (LRR P, T, U)) (LRR U) R P, T) k Surface (A11) (A12) c (A16) (MLRA 150 al (S1) (LRR O, S) x (S4)	A)	on-Manganese mbric Surface (elta Ochric (F1 educed Vertic (iedmont Floodp	(F3) ace (F6) urface (F7) ons (F8)	.RR O, P, T) U) 0A, 150B) (MLRA 1494	Piedr Anon (MLF Red I Very Other ³ Indica wet unle	nont Floodplai halous Bright L A 153B) Parent Materia Shallow Dark r (Explain in R tors of hydropp land hydrology ess disturbed o	18) (outside M in Soils (F19) (Loamy Soils (F al (TF2) Surface (TF12	(LRR P, S, T) 20)) tion and ent.
Restrictive Layer (if pre Type: Depth (inches):	sent):					Hydric Soil P	resent?	Yes X	No

Project/Site:	REDI Arkansas	City/County: Homan	Township, Texarka	ana, Miller Count	Sampling Dat	te: 03/02/2021
Applicant/Owner:	AR-TX REDI	_ , ,			Sampling Poi	
Investigator(s):	Roger Willis	Section, Township, Ra				
Landform (hillslope, terrace, etc):	pasture	Local relief (concave,	convex, none):	none	S	lope (%): 0
Subregion (LRR or MLRA):		33.532302		-93.89216	D	atum: WGS 1984
Soil Map Unit Name:	Bossier clay, 0 to 1 pe	rcent slopes		NWI classification	n: I	Non-wetland
Are climatic / hydrologic conditions of	on the site typical for this time of year?	Yes No	X (If no, ε	explain in Remarks	s.)	
Are Vegetation, Soil	, or Hydrologysignifican	itly disturbed?	Are "Normal Circu	umstances" preser	nt? Yes	X No
Are Vegetation, Soil	, or Hydrologynaturally	problematic?	(If needed, explai	in any answers in F	Remarks.)	
SUMMARY OF FINDINGS -	Attach site map showing sar	mpling point locati	ions, transect	ts, important f	ieatures, ef	tc.
Hydrophytic Vegetation Present?	Yes No X					
Hydric Soil Present?	Yes No X		pled Area			
Wetland Hydrology Present?	Yes No X		-	Yes	No	x
Remarks: High precipitation in	preceding weeks.	I				
HYDROLOGY						
Wetland Hydrology Indicators:						
Primary Indicators (minimum of or	ne required: check all that apply)			Secondary Indicat	tors (minimum	of two required)
Surface Water (A1)	Aquatic Fau	ina (B13)		Surface Soil		/
High Water Table (A2)		its (B15) (LRR U)				ave Surface (B8)
Saturation (A3)		ulfide Odor (C1)		Drainage Pat		
Water Marks (B1)	Oxidized Rh	nizospheres along Living	Roots (C3)	Moss Trim Li	ines (B16)	
Sediment Deposits (B2)	Presence of	f Reduced Iron (C4)		Dry-Season	Water Table (0	C2)
Drift Deposits (B3)	Recent Iron	Reduction in Tilled Soils	(C6)	Crayfish Bur	rows (C8)	
Algal Mat or Crust (B4)	Thin Muck S	Surface (C7)		Saturation Vi	isible on Aeria	al Imagery (C9)
Iron Deposits (B5)	Other (Expla	ain in Remarks)		Geomorphic	Position (D2)	
Inundation Visible on Aerial I	magery (B7)			Shallow Aqui	itard (D3)	
Water-Stained Leaves (B9)				FAC-Neutral	Test (D5)	
				Sphagnum m	noss (D8) (LR	2R Τ, U)
Field Observations:						
Surface Water Present?	Yes No X Depth (incl	hes).				
Water Table Present?	Yes No X Depth (incl	,				
Saturation Present?	Yes No X Depth (incl	·	Wetland Hydro	ology Present?	Yes	No X
(includes capillary fringe)						
			<u> </u>			
Describe Recorded Data (stream	gauge, monitoring well, aerial photos,	previous inspection), if a	ivailable:			
Remarks:						

/EGETATION (Four Strata) - Use scientific name	s of plant	s.			Sam	pling Poin	t: UI	DP-5
<u>Tree Stratum</u> (Plot size: <u>r=30'</u>) 1	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Number of Domina That Are OBL, FA	ant Species		0	(A)
2. 3. 4.				Total Number of D Species Across Al			2	_ (B)
5 6 7				Percent of Domina That Are OBL, FA	•		0.0	(A/B)
8		= Total Cov		Prevalence Index				
E0% of total action 0		-		Total % Cove		Mu	Itiply by:	
50% of total cover: 0	20%	of total cover:	:	OBL species	0	x 1 =	0	
Sapling/Shrub Stratum (Plot size: r=20')				FACW species	0	x 2 =	0	
1				FAC species	35	x 3 =	105	
2				FACU species	100	x 4 =	400	
3				UPL species	50	x 5 =	250	
4.				Column Totals:	185	(A)	755	(B)
5								
6				Prevalence	Index = B/A =	-	4.08	
7								
8				Hydrophytic Veg	etation Indic	ators:		
	0	= Total Cov	er	1 - Rapid Tes	t for Hydroph	ytic Veget	ation	
50% of total cover: 0	20% (of total cover:	: 0	2 - Dominanc	e Test is >50	%		
Herb Stratum (Plot size: <u>1 square meter</u>)				3 - Prevalenc	e Index ≤3.0¹			
1. Cynodon dactylon / Bermuda grass	100	Yes	FACU	Problematic H	Hydrophytic V	egetation	¹ (Explain)	
2. Medicago minima / Small bur clover, Burclover	40	Yes	UPL					
3. Ranunculus fascicularis / Early buttercup	35	No	FAC	¹ Indicators of hydr	ic soil and we	etland hyd	rology mus	st
4. Festuca versuta / Texas fescue	10	No	UPL	be present, unless	disturbed or	problema	tic.	
5.	-					•		
6.				Definitions of Fo	ur Vegetatio	n Strata:		
7.								
8.				Tree – Woody pla	nts, excluding	y vines, 3 i	in. (7.6 cm) or
				more in diameter a	at breast heig	ht (DBH),	regardless	s of
9				height.				
10				-				
11 12.				Sapling/Shrub –	Woody plants	, excludin	g vines, le	ss
۱ <u>۲</u> .	185	= Total Cov		than 3 in. DBH and	d greater than	n 3.28 ft (1	l m) tall.	
E0% of total action 02		-			0	```	,	
50% of total cover: <u>92</u>	20%0	of total cover:	: 37	Herb – All herbace	eous (non-wo	odv) plan	ts regardle	ess
Woody Vine Stratum (Plot size: r=20')				of size, and wood	•	• / •	-	
1						.nan 0.20	it tan.	
2				Woody vine – All	woody vinos	graatar th	on 2 20 ft i	in
3				-	woody vines	greater in	an 5.20 it	
4				height.				
5				Hydrophytic				
	0	= Total Cov	er	Vegetation				
50% of total cover: 0	20% (of total cover:	. 0	Present?	Yee	No	X	
				i iosonti	103		<u> </u>	
Pomarka (if obcarved, list marphalagical adaptions below)								

(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
0-18	7.5YR 4/3	100	, , , , , , , , , , , , , , , , ,				sandy clay		
Туре: С=Со	ncentration, D=Depletic	on, RM=Reduce	ed Matrix, MS=Mask	ed Sand Grai	ns.		2Locat	ion: PL=Po	ore Lining, M=Matrix.
lydric Soil	Indicators: (Applicable	e to all LRRs,	unless otherwise n	oted.)			Indicators	for Proble	ematic Hydric Soils ³ :
Histoso	I (A1)		Polyvalue B	elow Surface	(S8) (LR	R S, T, U)	1 cm M	/luck (A9)	(LRR O)
Histic E	pipedon (A2)		Thin Dark S	urface (S9) (LRR S, T,	U)	2 cm M	/luck (A10	(LRR S)
	istic (A3)		Loamy Muc	ky Mineral (F	1) (LRR C)			F18) (outside MLRA 150A,B
Hydroge	en Sulfide (A4)		Loamy Gley	ed Matrix (F2)		Piedm	ont Floodp	lain Soils (F19) (LRR P, S, T)
	d Layers (A5)		Depleted M	atrix (F3)					nt Loamy Soils (F20)
Organic	Bodies (A6) (LRR P, T	; U)	Redox Dark	Surface (F6)				A 153B)	
5 cm Mi	ucky Mineral (A7) (LRF	R P, T, U)	Depleted Da	ark Surface (F	7)		Red P	arent Mate	erial (TF2)
	resence (A8) (LRR U)		Redox Depr	ressions (F8)	,		Very S	hallow Da	rk Surface (TF12)
	uck (A9) (LRR P, T)		 Marl (F10)	, ,					Remarks)
	d Below Dark Surface (A11)		chric (F11) (M	ILRA 151)			、 1	/
·	ark Surface (A12)	,	·	nese Masses			³ Indicate	ors of hvdr	opphobic vegetation and
	Prairie Redox (A16) (MI	LRA 150A)		ace (F13) (L	· /·				ogy must be present.
	Mucky Mineral (S1) (LF			c (F17) (MLR		,		2	d or problematic.
_ `	Gleyed Matrix (S4)			ertic (F18) (M		150B)			p
-	Redox (S5)			loodplain Soil					
	d Matrix (S6)			•	· / ·		-, 149A, 153C, 153	וחא	
	urface (S7) (LRR P, S,	T, U)		Bright Loanny	00113 (1 20	// (IIIE104	140, 1000, 100	.2)	
Restrictive I	Layer (if present):								
Туре:									
Depth (ir	nches):						Hydric Soil Pr	esent?	Yes NoX
Remarks:									

Project/Site:	REDI Arkansas	City/County: Homan	Township, Texarka	ana, Miller Count	Sampling Dat	te: 03/03/2021
Applicant/Owner:	AR-TX REDI				Sampling Poi	
Investigator(s):	Roger Willis	Section, Township, Ra				-
Landform (hillslope, terrace, etc):	pasture	Local relief (concave,		none	S	lope (%): 0
Subregion (LRR or MLRA):				-93.889044	D	atum: WGS 1984
Soil Map Unit Name:	Rilla silt loam, 0 to 1 per	rcent slopes		NWI classificatio	n:	Non-wetland
Are climatic / hydrologic conditions	on the site typical for this time of year?	Yes No	X (If no, e	xplain in Remarks	s.)	
Are Vegetation , Soil	, or Hydrologysignificant	ly disturbed?	Are "Normal Circu	umstances" preser	nt? Yes	X No
	, or Hydrology naturally p		(If needed, explain	n any answers in I	Remarks.)	
SUMMARY OF FINDINGS -	Attach site map showing san	npling point locati	ons, transect	s, important f	eatures, e	tc.
Hydrophytic Vegetation Present?	· · ·			•		
Hydric Soil Present?	Yes No X		pled Area			
Wetland Hydrology Present?	Yes No X		•	Yes	No	х
Remarks: High precipitation in	preceding weeks					
HYDROLOGY						
Wetland Hydrology Indicators:						f f
Primary Indicators (minimum of o	· · · · · · · · · · · · · · · · · · ·	(D40)		Secondary Indicat		i of two required)
Surface Water (A1)	Aquatic Faur	()		Surface Soil		No Surface (P9)
High Water Table (A2) Saturation (A3)		s (B15) (LRR U) ulfide Odor (C1)		Drainage Pa		ave Surface (B8)
Water Marks (B1)		izospheres along Living	Poots (C3)	Moss Trim Li	. ,	
Sediment Deposits (B2)		Reduced Iron (C4)	10013 (03)		Water Table ((2)
Drift Deposits (B3)		Reduction in Tilled Soils	(C6)	Crayfish Bur		52)
Algal Mat or Crust (B4)	Thin Muck St		(00)		. ,	I Imagery (C9)
Iron Deposits (B5)		in in Remarks)			Position (D2)	
Inundation Visible on Aerial I		in in romano)	·	Shallow Aqu	. ,	
Water-Stained Leaves (B9)				FAC-Neutral		
			•		noss (D8) (LF	R T. U)
					····· () (
Field Observations:						
Surface Water Present?	Yes <u>No X</u> Depth (inch	ies):				
Water Table Present?	Yes No _ X Depth (inch					
Saturation Present?	Yes No _ X _ Depth (inch	ies):	Wetland Hydro	ology Present?	Yes	No <u>X</u>
(includes capillary fringe)						
Describe Recorded Data (stream	gauge, monitoring well, aerial photos, p	previous inspection), if a	vailable:			
Remarks:						

VEGETATION (Four Strata) - Use scientific name	s of plant	s.			Sam	oling Poin	t: <u>T</u> 3	DP1
Tree Stratum (Plot size: r=30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test w Number of Dominar That Are OBL, FAC	nt Species		0	(A)
1 2				Total Number of Do				_ 、 /
3				Species Across All			1	(B)
56				Percent of Dominar	•			
7.				That Are OBL, FAC	W, or FAC:		0.0	(A/B)
8			·	Prevalence Index	worksheet:			
E0% of total covers	0	= Total Cove		Total % Cover			Iltiply by:	
50% of total cover: 0	20%0	of total cover:	0	OBL species	0	x 1 =	0	
Sapling/Shrub Stratum (Plot size: r=20')				FACW species	0	x 2 =	0	
1				FAC species	25	x 3 =	75	
2				FACU species	100	x 4 =	400	
3			·	UPL species	40	x 5 =	200	
4			·	Column Totals:	165	(A)	675	(B)
56.			·					
				Prevalence In	dex = B/A =		4.09	
7 8				Hydrophytic Veget	ation Indic	ators:		
	0	= Total Cov		1 - Rapid Test			ation	
50% of total cover: 0		of total cover:		2 - Dominance	• • •			
Herb Stratum (Plot size: 1 square meter)				3 - Prevalence				
1. Cynodon dactylon / Bermuda grass	100	Yes	FACU	Problematic Hy			(Explain)	
2. Festuca versuta / Texas fescue	30	No	UPL			ogotation	(Explain)	
3. Ranunculus fascicularis / Early buttercup	25	No	FAC	¹ Indicators of hydric	soil and we	tland hvd	roloav mus	st
4. <i>Medicago minima /</i> Small bur clover, Burclover	10	No	UPL	be present, unless of		-		-
5	_			· · ·				
6.				Definitions of Four	r Vegetatior	n Strata:		
7.								
8.				Tree – Woody plant	s, excluding	vines, 3 i	in. (7.6 cm) or
9.				more in diameter at	breast heig	ht (DBH),	regardless	s of
10			·	height.				
11.								
12.				Sapling/Shrub – W	loody plants	, excludin	g vines, le	SS
	165	= Total Cove	ər	than 3 in. DBH and	greater thar	n 3.28 ft (1	l m) tall.	
50% of total cover: 82	20% (- of total cover:						
Woody Vine Stratum (Plot size: r=20')				Herb – All herbaced	ous (non-wo	ody) plan	ts, regardle	ess
1.				of size, and woody	plants less t	han 3.28 t	ft tall.	
2								
3.	_			Woody vine – All w	oody vines	greater th	an 3.28 ft i	n
4.	_			height.				
5.	_							
	0	= Total Cove		Hydrophytic				
50% of total cover: 0		of total cover:		Vegetation				
	20700			Present?	Yes	No	Х	
Pomarka (if observed, list morphological adaptions below)				1				

(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remark	s
0-16	7.5YR 4/4	100					sandy clay loar			
					·					
		·								
Ivpe: C=Co	ncentration, D=Depletio	n RM=Reduc	ed Matrix_MS=Mas	ked Sand Gra	ains		21 oca	tion: PI =P	ore Lining, M	=Matrix
									ematic Hydri	
Histosol Histic E Black H Hydroge Stratifier Organic 5 cm Mu Muck Pr 1 cm Mu Deplete Thick Da Coast P Sandy M Sandy C Sandy F	ndicators: (Applicable (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) Bodies (A6) (LRR P, T, Jucky Mineral (A7) (LRR resence (A8) (LRR U) Juck (A9) (LRR P, T) d Below Dark Surface (A ark Surface (A12) rairie Redox (A16) (ML Aucky Mineral (S1) (LR Gleyed Matrix (S4) Redox (S5) d Matrix (S6)	. U) t P, T, U) A11) .RA 150A)	Polyvalue Thin Dark Loamy Mu Loamy Gle Depleted M Redox Dar Cepleted C Redox Depleted C Redox Depleted C Iron-Mang: Umbric Su Delta Ochr Reduced V Piedmont I	Below Surface Surface (S9) cky Mineral (I eyed Matrix (F Matrix (F3) k Surface (F6 Dark Surface oressions (F8 (LRR U) Dchric (F11) (anese Masse rface (F13) (ric (F17) (ML /ertic (F18) (Floodplain Sc	(LRR S, T, F1) (LRR (22) 6) (F7) 9) (MLRA 151 (S (F12) (LR (LRR P, T, L (RR P, T, L (MLRA 150) (MLRA 150) (MLRA 150) (M	, U)) R O, P, T) J) A, 150B) /ILRA 149	1 cm 2 cm Redu Piedn Anom (MLR Red F Very 3 Other 3Indicat wett unle	Muck (A9) Muck (A10 ced Vertic of nont Flood alous Brig A 153B) Parent Mate Shallow Da (Explain ir tors of hydr and hydrol ess disturbe	(LRR O)) (LRR S) (F18) (outsic olain Soils (F ht Loamy Soi	le MLRA 150A, 19) (LRR P, S, T Is (F20) (F12) getation and present.
_ Dark Su	rface (S7) (LRR P, S,	T, U)								
Restrictive L	ayer (if present):									
Type: Depth (in	iches):						Hydric Soil P	resent?	Yes	NoX
Remarks:							1			
Project/Site:	REDI Arkansas		City/Cour	nty: Homan T	ownship, Texarl	kana, Miller Count	Sampling D	Date: 0)3/03/2021	
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Applicant/Owner:		TX REDI					Sampling F		T4DP1	
Investigator(s):	Roger Willis		Section, -	Township, Rar	nge:					
Landform (hillslope, terrace, etc):	pasture		Local reli	ef (concave, c	convex, none):	none		Slope (%): 0	
Subregion (LRR or MLRA):		Lat:		.543258				Datum:	WGS 1984	
Soil Map Unit Name:	Rilla silt loa	am, 0 to 1 perc	ent slope:	s		NWI classificatio	n:	Non-wet	lland	
Are climatic / hydrologic conditions o			-		X (If no,	explain in Remarks	s.)			
Are Vegetation, Soil					Are "Normal Circ	cumstances" prese	nt? Ye	s X	No	
Are Vegetation, Soil	, or Hydrology	naturally pro	oblematic	? (If needed, expla	ain any answers in	Remarks.)			
SUMMARY OF FINDINGS - A	Attach site map sho	owing sam	pling po	oint locatio	ons, transec	ts, important f	features,	etc.		
Hydrophytic Vegetation Present?	Yes	No X								
Hydric Soil Present?	Yes		_	Is the Samp	oled Area					
Wetland Hydrology Present?	Yes		_	within a We		Yes	No	х		
Remarks: High precipitation in p	preceding weeks									
HYDROLOGY										
Wetland Hydrology Indicators:										
Primary Indicators (minimum of or	ne required: check all that	apply)				Secondary Indica	to <u>rs (minim</u>	u <u>m of two</u>	required)	
Surface Water (A1)		Aquatic Fauna	a (B13)			Surface Soil		,		
High Water Table (A2)	!	Marl Deposits	(B15) (L	RR U)		Sparsely Ve	getated Cor	ncave Surfa	ace (B8)	
Saturation (A3)		Hydrogen Sulf		. ,		Drainage Pa)		
Water Marks (B1)		Oxidized Rhizo	-		Roots (C3)	Moss Trim L	. ,			
Sediment Deposits (B2)		Presence of R		. ,		Dry-Season		e (C2)		
Drift Deposits (B3)		Recent Iron Re			(C6)	Crayfish Bur	. ,		(00)	
Algal Mat or Crust (B4)		Thin Muck Sur	. ,			Saturation V		-	ry (C9)	
Iron Deposits (B5)		Other (Explain	i in Remai	rks)		Geomorphic		(2)		
Inundation Visible on Aerial Ir Water-Stained Leaves (B9)	nagery (Br)					Shallow Aqu FAC-Neutral	• •			
						Sphagnum n				
							1033 (D0) (
Field Observations:										
Surface Water Present?	Yes NoX	Depth (inche	s):							
Water Table Present?	Yes NoX	Depth (inche	·							
Saturation Present?	Yes NoX	Depth (inche	s):		Wetland Hyd	rology Present?	Yes	N	lo <u>X</u>	
(includes capillary fringe)										
Describe Recorded Data (stream	gauge, monitoring well, ae	rial photos, pr	revious ins	spection), if av	/ailable:					
Remarks:										
									I	

VEGETATION (Four Strata) - Use scientific name	s of plant	s.			Sampling Poir	nt: <u> </u>	IDP1
				Dominance Test works	sheet:		
	Absolute	Dominant	Indicator	Number of Dominant Sp			
Tree Stratum (Plot size: r=30')	% Cover	Species?	Status	That Are OBL, FACW, o		0	(A)
1.				That Are OBL, FACW, 0	I FAC.	0	(A)
2.							
2				Total Number of Domina	ant		
1			·	Species Across All Strat	a:	1	(B)
-							
5				Percent of Dominant Sp	ecies		
6				That Are OBL, FACW, o		0.0	(A/B)
7						0.0	_ ()
8				Prevalence Index work	(sheet:		
	0	= Total Cove	er	Total % Cover of:		ultiply by:	
50% of total cover: 0	20%	of total cover:	0		$\frac{1}{x 1 = 1}$		
Sapling/Shrub Stratum (Plot size: r=20')				· · · · · · · · · · · · · · · · · · ·			
					0 x 2 =	0	
1				-	0 x 3 =	0	
2			·	FACU species 1	00 x 4 =	400	
3			·	UPL species	0 x 5 =	0	
4				Column Totals: 1	00 (A)	400	(B)
5	_				、 /		、 /
6				Prevalence Index	= B/A =	4.0	
7.						4.0	
0			·	Hydrophytic Vegetatio	n Indicators:		
ö	0	= Total Cove		1 - Rapid Test for H		tation	
E00/ of total action		-				allon	
	20%	of total cover:	0	2 - Dominance Test			
Herb Stratum (Plot size: <u>1 square meter</u>)				3 - Prevalence Inde			
1. Cynodon dactylon / Bermuda grass	100			Problematic Hydrop	ohytic Vegetation	¹ (Explain)	
2							
3				¹ Indicators of hydric soil	and wetland hyd	drology mus	st
4.				be present, unless distu	rbed or problem;	atic.	
E					· .		
6			·	Definitions of Four Veg	getation Strata:		
			·				
7			·	Tree – Woody plants, ex	cluding vines 3	in (7.6 cm) or
8				more in diameter at brea	-	•	
9			·		stricight (DDH)	, regardies.	5 01
10				height.			
11							
12				Sapling/Shrub – Wood	• •	-	SS
	100	= Total Cove	er	than 3 in. DBH and grea	iter than 3.28 ft (1 m) tall.	
50% of total cover: 50	20%	of total cover:	20				
Woody Vine Stratum (Plot size: r=20')				Herb – All herbaceous (non-woody) plar	nts, regardle	ess
				of size, and woody plant	ts less than 3.28	ft tall.	
1			·	, ,,			
2				Woody vine – All wood	v vines greater t	nan 3 28 ft	in
3					y villes greater ti	1an 5.20 it	
4				height.			
5				Hydrophytic			
	0	= Total Cove	er	Hydrophytic			
50% of total cover: 0	20%	of total cover:	0	Vegetation			
				Present? Y	es No	o <u>X</u>	
				1			

SOIL

(inches)	Color (moist)	%	Color (moist)	% Type	¹ Loc ²	Texture	Remarks		
0-18	7.5YR 4/4	100				sandy clay loar	romano		
						·			
						·			
Туре: С=Со	ncentration, D=Depletion	n, RM=Reduce	ed Matrix, MS=Mas	ked Sand Grains.		² Location	n: PL=Pore Lining, M=Matrix.		
lydric Soil I	ndicators: (Applicable	to all LRRs,	unless otherwise	noted.)		Indicators fo	r Problematic Hydric Soils ³ :		
Histosol	(A1)		Polyvalue	Below Surface (S8)	(LRR S, T, U)) 1 cm Mu	ick (A9) (LRR O)		
Histic Ep	Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U)				S, T, U)	2 cm Mu	ick (A10) (LRR S)		
Black Histic (A3)				icky Mineral (F1) (LF	RR O)	Reduced Vertic (F18) (outside MLRA 150A,B			
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)				Piedmont Floodplain Soils (F19) (LRR P, S, T)			
Stratified Layers (A5)		Depleted M	Depleted Matrix (F3)			Anomalous Bright Loamy Soils (F20)			
Organic Bodies (A6) (LRR P, T, U)		Redox Dark Surface (F6)			(MLRA 153B)				
5 cm Mu	ucky Mineral (A7) (LRR	P, T, U)	Depleted Dark Surface (F7)			Red Parent Material (TF2)			
Muck Pr	resence (A8) (LRR U)		Redox De	pressions (F8)		Very Sha	/ery Shallow Dark Surface (TF12)		
1 cm Mu	ıck (A9) (LRR P, T)		Marl (F10)	(LRR U)		Other (E	xplain in Remarks)		
Depleted	d Below Dark Surface (A	A11)	Depleted 0	Ochric (F11) (MLRA	151)				
Thick Da	ark Surface (A12)		Iron-Mang	anese Masses (F12)	(LRR O, P, T)	³ Indicators	s of hydropphobic vegetation and		
Coast P	rairie Redox (A16) (ML	.RA 150A)	Umbric Su	rface (F13) (LRR P,	T, U)	wetland hydrology must be present.			
Sandy N	/lucky Mineral (S1) (LR	R O, S)	Delta Och	Delta Ochric (F17) (MLRA 151)			unless disturbed or problematic.		
Sandy G	Gleyed Matrix (S4)		Reduced \	/ertic (F18) (MLRA	150A, 150B)				
Sandy F	Redox (S5)		Piedmont	Floodplain Soils (F19) (MLRA 149	A)			
Stripped	Matrix (S6)		Anomalou	s Bright Loamy Soils	(F20) (MLRA	4 149A, 153C, 153D)		
Dark Su	rface (S7) (LRR P, S, 1	r, U)	—	0					
Restrictive L	.ayer (if present):								
Type:									
Depth (in	ches):					Hydric Soil Pres	sent? Yes <u>No X</u>		
Remarks:						1			
Nonial No.									

Project/Site:	REDI Arkansas	City/County: Homan To	ownship, Texarkan	a, Miller Count	Sampling Da	te: 03/03/2021
Applicant/Owner:		· · ·				int: T4DP2/WDP-6
Investigator(s):	Roger Willis	Section, Township, Ran	ige:			
Landform (hillslope, terrace, etc):	pasture	Local relief (concave, co	onvex, none):	concave	e S	Slope (%): 1
Subregion (LRR or MLRA):		33.53589	Long:	-93.878564	C	Datum: WGS 1984
Soil Map Unit Name:		cent slopes	N	WI classificatio	n:	Non-wetland
Are climatic / hydrologic conditions c	on the site typical for this time of year?	Yes No	X (If no, exp	plain in Remarks	s.)	
Are Vegetation, Soil	, or Hydrologysignificant	ily disturbed? A	re "Normal Circum	istances" preser	nt? Yes	X No
Are Vegetation, Soil	, or Hydrologynaturally p	problematic? (If	lf needed, explain a	any answers in l	Remarks.)	
SUMMARY OF FINDINGS -	Attach site map showing san	npling point locatio	ons, transects,	, important f	features, e	tc.
Hydrophytic Vegetation Present?	Yes X No					
Hydric Soil Present?	Yes X No	Is the Samp	led Area			
Wetland Hydrology Present?	Yes X No	within a Wet	tland?	Yes X	No	
Remarks: High precipitation in	preceding weeks	I				
HYDROLOGY						
Wetland Hydrology Indicators:						
Primary Indicators (minimum of or	e required: check all that apply)		Se	econdary Indica	tors (minimun	n of two required)
X Surface Water (A1)	X Aquatic Faur	าa (B13)	_	Surface Soil	Cracks (B6)	
High Water Table (A2)		ts (B15) (LRR U)	_		-	ave Surface (B8)
Saturation (A3)		ulfide Odor (C1)	_	Drainage Pa		
Water Marks (B1)		izospheres along Living R	oots (C3)	Moss Trim Li	()	
Sediment Deposits (B2)		Reduced Iron (C4)			Water Table (C2)
Drift Deposits (B3)		Reduction in Tilled Soils (0	C6)	Crayfish Bur	. ,	- (00)
Algal Mat or Crust (B4)	Thin Muck S		_		Position (D2)	al Imagery (C9)
Iron Deposits (B5) X Inundation Visible on Aerial II		iin in Remarks)	—	Shallow Aqu		
Water-Stained Leaves (B9)	hagery (D7)		>	K FAC-Neutral		
					noss (D8) (LF	R T. U)
					() (
Field Observations:						
Surface Water Present?		nes): <u>3</u>				
Water Table Present?	Yes <u>No X</u> Depth (inch	·				
Saturation Present?	Yes <u>No X</u> Depth (inch	ies):	Wetland Hydrold	ogy Present?	Yes 📝	KNo
(includes capillary fringe)						
Describe Recorded Data (stream	gauge, monitoring well, aerial photos,	previous inspection), if ava	ailable:			
Remarks:						
Nonano.						

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

Sampling Point: T4DP2/WDP-6

, , , , , , , , , , , , , , , , , , ,	•						
	Absolute	Dominant	Indicator	Dominance Test worksheet:			
Tree Stratum (Distaire: $r=20$)				Number of Dominant Species			
Tree Stratum (Plot size: r=30')	% Cover	Species?	Status	That Are OBL, FACW, or FAC:	1	(A)	
1							
2			·	Total Number of Dominant			
3				Species Across All Strata:	1	(B)	
4				Species Across Air Strata.		(B)	
5							
6.				Percent of Dominant Species			
7			·	That Are OBL, FACW, or FAC:	100	0.0 (A/B)	.)
7							
8			<u> </u>	Prevalence Index worksheet:			
	0	= Total Cove		Total % Cover of:	Multipl	y by:	
50% of total cover: 0	20%	of total cover:	0	OBL species 80	x 1 =	80	
Sapling/Shrub Stratum (Plot size: r=20')				FACW species 0	x 2 =	0	
1.				FAC species 0	x 3 =	0	
2.				FACU species 0	x 4 =	0	
3.				· · · · · · · · · · · · · · · · · · ·		<u> </u>	
				UPL species 0	x 5 =	0	
			·	Column Totals: 80	(A)	80 (B)	i)
5							
6			. <u> </u>	Prevalence Index = B/A =	1.0	0	
7							
8				Hydrophytic Vegetation Indica	itors:		
	0	= Total Cov	er	X 1 - Rapid Test for Hydrophy	/tic Vegetatio	n	
50% of total cover: 0	20%	of total cover:		X 2 - Dominance Test is >50%	-		
Herb Stratum (Plot size: 1 square meter)	2070			$\frac{X}{X}$ 3 - Prevalence Index $\leq 3.0^{1}$	0		
· · · · · · · · · · · · · · · · · · ·			0.51				
1. <i>Ludwigia peploides /</i> Marsh purslane	80	Yes	OBL	Problematic Hydrophytic Ve	etation' (E)	kplain)	
2							
3.				¹ Indicators of hydric soil and we	tland hydrolo	gy must	
4				be present, unless disturbed or	problematic.		
5							
				Definitions of Four Vegetation	Strata:		
7			·				
	· ·			Tree – Woody plants, excluding	vines 3 in (7 6 cm) or	
8				more in diameter at breast heigh	•	,	
9					it (DDH), ieg		
10				height.			
11							
12				Sapling/Shrub – Woody plants,	, excluding vi	nes, less	
	80	= Total Cov	er	than 3 in. DBH and greater than	3.28 ft (1 m)	tall.	
50% of total cover: 40		of total cover:					
	2070		10	Herb – All herbaceous (non-woo	odv) plants, r	edardless	
Woody Vine Stratum (Plot size: r=20')				of size, and woody plants less th			
1				or size, and woody plants less th	1411 0.20 11 14		
2							
3		<u> </u>		Woody vine – All woody vines g	greater than 3	5.28 π in	
4.				height.			
5.			·				
	0	= Total Cove	er	Hydrophytic			
E00/ of total powers		-		Vegetation			
50% of total cover: 0	20%	of total cover:	0	Present? Yes X	(No		
Remarks (if observed, list morphological adaptions below)							

S	O	11	

Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MI Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F19) Organic Bodies (A6) (LRR P, T, U) X Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck (A9) (LRR P, T) Marl (F10) (LRR U) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Inon-Manganese Masses (F12) (LRR O, P, T) Indicators of hydropphobic vegetat Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 150A, 150B) Indicators of hydropphobic vegetat wetland hydrology must be pressue <	Depth	iption: (Describe to t Matrix			k Features					
"Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. *Location: PL=Pore Lining, M=Ma Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric So Histosol (A1) Polyvalue Below Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A9) (LRR O) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MI Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F2) Piedmont Floodplain Soils (F19) Muck Mineral (A7) (LRR P, T, U) X Redox Dark Surface (F6) (MLRA 153B) 5 cm Muck (A9) (LRR P, T) Mart (F10) Red Parent Material (TF2) Muck Presence (A8) (LRR P, T) Mart (F10) URR P, T0) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) other (Explain in Remarks) other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F13) (LRR P, T, U) anomalous Bright Loamy Soils (F19) (MLRA 149A) stingted Matrix (S6) Sandy Mucky Mineral (S1) (LRR A (S0) Piedmont Floodplain Soils (F19) (MLRA 149A) stingted Matrix (S6)	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histosol (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MI Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (Organic Bodies (A6) (LRR P, T, U) X Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) other (Explain in Remarks) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) alndicators of hydropphobic vegetat Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 150A, 150B) alndicators of hydropphobic vegetat Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A) <td>0-18</td> <td>7.5YR 4/2</td> <td>80</td> <td>7.5YR 6/8</td> <td>20</td> <td><u>с</u></td> <td>M</td> <td>silty clay</td> <td></td>	0-18	7.5YR 4/2	80	7.5YR 6/8	20	<u>с</u>	M	silty clay		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Sol Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histosol (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MI Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (Organic Bodies (A6) (LRR P, T, U) X Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Indicators of hydropphobic vegetat Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) anomalous Bright Loamy Soils (F20) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A), 153C, 153D) anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if present): Type: Type:										
Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histosol (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MI Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F19) Organic Bodies (A6) (LRR P, T, U) X Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck (A9) (LRR P, T) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Indicators of hydropphobic vegetat Coast Prairie Redox (A16) (MLRA 150A) Delta Ochric (F17) (MLRA 151) wetland hydrology must be pressions (F19) (MLRA 149A) Sandy Gleyed Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if present): Type: Type:	Type: C=Con	centration, D=Depletic	n, RM=Reduc	ed Matrix, MS=Masi	ked Sand Gra	ains.		² Location	: PL=Pore Lining, M=Matrix.	
Туре:	Histosol (Histic Epi Black His Hydroger Stratified Organic E 5 cm Muc Muck Pre 1 cm Muc Depleted Thick Dar Coast Pra Sandy Mi Sandy Gl Sandy Re Stripped	Histosol (A1)Polyvalue Below Surface (S8) (LRR S, T, U)Histic Epipedon (A2)Thin Dark Surface (S9) (LRR S, T, U)Black Histic (A3)Loamy Mucky Mineral (F1) (LRR O)Hydrogen Sulfide (A4)Loamy Gleyed Matrix (F2)Stratified Layers (A5)Depleted Matrix (F3)Organic Bodies (A6) (LRR P, T, U)XStratified Layers (A5)Depleted Matrix (F3)Organic Bodies (A6) (LRR P, T, U)XRedox Dark Surface (F6)5 cm Mucky Mineral (A7) (LRR P, T, U)Depleted Dark Surface (F7)Muck Presence (A8) (LRR U)Redox Depressions (F8)1 cm Muck (A9) (LRR P, T)Marl (F10) (LRR U)Depleted Below Dark Surface (A11)Depleted Ochric (F11) (MLRA 151)Thick Dark Surface (A12)Iron-Manganese Masses (F12) (LRR O, P, Coast Prairie Redox (A16) (MLRA 150A)Sandy Mucky Mineral (S1) (LRR O, S)Delta Ochric (F17) (MLRA 151)Sandy Gleyed Matrix (S4)Reduced Vertic (F18) (MLRA 150A, 150BSandy Redox (S5)Piedmont Floodplain Soils (F19) (MLRA 14Stripped Matrix (S6)Anomalous Bright Loamy Soils (F20) (MLRA 14				; U) O) RR O, P, T) J) MA, 150B) MLRA 149A	 2 cm Muck (A10) (LRR S) Reduced Vertic (F18) (outside MLRA 150// Piedmont Floodplain Soils (F19) (LRR P, S) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) P, T) ³ Indicators of hydropphobic vegetation and wetland hydrology must be present. unless disturbed or problematic. OB)			
	Туре:									
Depth (inches): Hydric Soil Present? Yes X	Depth (inc	hes):						Hydric Soil Pres	ent? Yes X No	
Remarks:	Remarks:									

Project/Site:	REDI Arkansas	City/County: Homan	Township, Texar	rkana, Miller Count	Sampling Date:	10/20/2021
Applicant/Owner:	AR-TX REDI		St	tate: Arkansas	Sampling Point:	T4DP2/WDP-6
Investigator(s):	Roger Willis	Section, Township, Ra	ange:			
Landform (hillslope, terrace, etc):	pasture	Local relief (concave,	convex, none):	concave	s Slope	e (%): 1
Subregion (LRR or MLRA):					Datu	m: WGS 1984
Soil Map Unit Name:	Bossier clay, 0 to 1 pe	ercent slopes		NWI classificatio	n: Non	n-wetland
Are climatic / hydrologic conditions c	n the site typical for this time of year	? Yes X No	(If no,	, explain in Remarks	s.)	
Are Vegetation, Soil	, or Hydrologysignifica	ntly disturbed?	Are "Normal Cir	rcumstances" preser	nt? Yes	X No
Are Vegetation, Soil	, or Hydrologynaturally	problematic?	(If needed, expl	lain any answers in I	Remarks.)	
SUMMARY OF FINDINGS -	Attach site map showing sa	mpling point locati	ions, transed	cts, important f	eatures, etc.	
Hydrophytic Vegetation Present?	Yes No X					
Hydric Soil Present?	Yes X No	Is the Sam	pled Area			
Wetland Hydrology Present?	Yes No X	within a W	/etland?	Yes	No X	
Remarks:		I				
HYDROLOGY						
Wetland Hydrology Indicators:						
Primary Indicators (minimum of or	ne required: check all that apply)			Secondary Indica	tors (minimum of	two required)
Surface Water (A1)	Aquatic Fa	una (B13)		Surface Soil	Cracks (B6)	
High Water Table (A2)	Marl Depos	sits (B15) (LRR U)		Sparsely Veg	getated Concave	Surface (B8)
Saturation (A3)	Hydrogen S	Sulfide Odor (C1)		Drainage Pa	tterns (B10)	
Water Marks (B1)		hizospheres along Living	Roots (C3)	Moss Trim Li	. ,	
Sediment Deposits (B2)		of Reduced Iron (C4)			Water Table (C2)	
Drift Deposits (B3)		n Reduction in Tilled Soils	(C6)	Crayfish Bur		()
Algal Mat or Crust (B4)		Surface (C7)			isible on Aerial Im	agery (C9)
Iron Deposits (B5) Inundation Visible on Aerial I		lain in Remarks)		Shallow Aqu	Position (D2)	
Water-Stained Leaves (B9)	hagery (Br)			FAC-Neutral		
					noss (D8) (LRR 1	r. u)
			<u> </u>		(- / (, -,
Field Observations:						
Surface Water Present?	Yes No X Depth (ind	,				
Water Table Present? Saturation Present?	Yes No X Depth (inc Yes No X Depth (inc	·	Wotland Uva	dralagy Dragont?	Vaa	No Y
(includes capillary fringe)	Yes <u>No X</u> Depth (inc	ines).	wettand Hyd	drology Present?	Yes	No X
(includes capillary ininge)						
Describe Recorded Data (stream	gauge, monitoring well, aerial photos	, previous inspection), if a	vailable:			
Remarks:						

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

Sampling Point: T4DP2/WDP-6

	Absolute	Dominant	Indicator	Dominance Test worksheet: Number of Dominant Species			
Tree Stratum (Plot size:)	% Cover	Species?	Status	That Are OBL, FACW, or FAC:	1	(A)	
1 2	·			Total Number of Dominant			
3.				Species Across All Strata:	2	(B)	
4							
5 6				Percent of Dominant Species That Are OBL, FACW, or FAC:	50.0	(A/B)	
7.						()	
8	·	<u></u>		Prevalence Index worksheet: Total % Cover of:	Multiply by		
	0	= Total Cove			Multiply by:		
	20% (of total cover:	0		(1 =		
Sapling/Shrub Stratum (Plot size: r=20')					$x^2 = 0$		
1					3 = 105		
2				· · · · · · · · · · · · · · · · · · ·	4 = 160		
3					c 5 = <u>200</u>		
4				Column Totals: 115 (/	A) 465	(B)	
5				Prevalence Index = B/A =	4.04		
7.				Hydrophytic Vegetation Indicato	are :		
8				1 - Rapid Test for Hydrophytic			
	0	= Total Cove	er	2 - Dominance Test is >50%	vegetation		
50% of total cover: 0	20% (of total cover:	0				
Herb Stratum (Plot size: 1 square meter)				3 - Prevalence Index ≤3.0 ¹			
1. Cynodon dactylon / Bermuda grass	40	Yes	FACU	Problematic Hydrophytic Vege	etation' (Explain)		
2. Cardiospermum halicacabum / Balloon vine	35	Yes	FAC				
3. <i>Medicago minima /</i> Small bur clover, Burclover	20	No	UPL	 ¹Indicators of hydric soil and wetland hydrology must 			
4. <i>Festuca versuta /</i> Texas fescue	20	No	UPL	be present, unless disturbed or problematic.			
5.				Definitions of Four Vegetation St	trata		
6.					liulu		
7				Tree - Woody plants, excluding vin	ues 3 in (7.6 cm)	or	
8.				more in diameter at breast height ((DBH), regardless	of	
9.				height.			
10							
11				Septime/Shrub Weedy plants and			
	·			Sapling/Shrub - Woody plants, ex than 3 in. DBH and greater than or			
12	115	= Total Cove		tall.		,	
50% of total cover: 57		of total cover:					
	20700						
Woody Vine Stratum (Plot size: r=20') 1.				Herb - All herbaceous (non-woody	v) plants, regardles	s of	
	·			size, and woody plants less than 3	.28 It tall.		
2	·						
3				Woody vines - All woody vines gre	eater than 3.28 ft i	n	
4.				height.			
5	·			I hadron hadio			
	0	= Total Cove		Hydrophytic			
50% of total cover: 0	20% (of total cover:	0	Vegetation			
				Present? Yes	No X		

S	O	11	

Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MI Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F19) Organic Bodies (A6) (LRR P, T, U) X Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck (A9) (LRR P, T) Marl (F10) (LRR U) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Inon-Manganese Masses (F12) (LRR O, P, T) Indicators of hydropphobic vegetat Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 150A, 150B) Indicators of hydropphobic vegetat wetland hydrology must be pressue <	Depth	iption: (Describe to t Matrix			k Features					
"Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. *Location: PL=Pore Lining, M=Ma Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric So Histosol (A1) Polyvalue Below Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A9) (LRR O) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MI Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F2) Piedmont Floodplain Soils (F19) Muck Mineral (A7) (LRR P, T, U) X Redox Dark Surface (F6) (MLRA 153B) 5 cm Muck (A9) (LRR P, T) Mart (F10) Red Parent Material (TF2) Muck Presence (A8) (LRR P, T) Mart (F10) URR P, T0) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) other (Explain in Remarks) other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F13) (LRR P, T, U) anomalous Bright Loamy Soils (F19) (MLRA 149A) stingted Matrix (S6) Sandy Mucky Mineral (S1) (LRR A (S0) Piedmont Floodplain Soils (F19) (MLRA 149A) stingted Matrix (S6)	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histosol (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MI Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (Organic Bodies (A6) (LRR P, T, U) X Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) other (Explain in Remarks) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) alndicators of hydropphobic vegetat Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 150A, 150B) alndicators of hydropphobic vegetat Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A) <td>0-18</td> <td>7.5YR 4/2</td> <td>80</td> <td>7.5YR 6/8</td> <td>20</td> <td><u>с</u></td> <td>M</td> <td>silty clay</td> <td></td>	0-18	7.5YR 4/2	80	7.5YR 6/8	20	<u>с</u>	M	silty clay		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Sol Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histosol (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MI Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (Organic Bodies (A6) (LRR P, T, U) X Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Indicators of hydropphobic vegetat Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) anomalous Bright Loamy Soils (F20) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A), 153C, 153D) anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if present): Type: Type:										
Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histosol (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MI Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F19) Organic Bodies (A6) (LRR P, T, U) X Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck (A9) (LRR P, T) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Indicators of hydropphobic vegetat Coast Prairie Redox (A16) (MLRA 150A) Delta Ochric (F17) (MLRA 151) wetland hydrology must be pressions (F19) (MLRA 149A) Sandy Gleyed Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if present): Type: Type:	Type: C=Con	centration, D=Depletic	n, RM=Reduc	ed Matrix, MS=Masi	ked Sand Gra	ains.		² Location	: PL=Pore Lining, M=Matrix.	
Туре:	Histosol (Histic Epi Black His Hydroger Stratified Organic E 5 cm Muc Muck Pre 1 cm Muc Depleted Thick Dar Coast Pra Sandy Mi Sandy Gl Sandy Re Stripped	Histosol (A1)Polyvalue Below Surface (S8) (LRR S, T, U)Histic Epipedon (A2)Thin Dark Surface (S9) (LRR S, T, U)Black Histic (A3)Loamy Mucky Mineral (F1) (LRR O)Hydrogen Sulfide (A4)Loamy Gleyed Matrix (F2)Stratified Layers (A5)Depleted Matrix (F3)Organic Bodies (A6) (LRR P, T, U)XStratified Layers (A5)Depleted Matrix (F3)Organic Bodies (A6) (LRR P, T, U)XRedox Dark Surface (F6)5 cm Mucky Mineral (A7) (LRR P, T, U)Depleted Dark Surface (F7)Muck Presence (A8) (LRR U)Redox Depressions (F8)1 cm Muck (A9) (LRR P, T)Marl (F10) (LRR U)Depleted Below Dark Surface (A11)Depleted Ochric (F11) (MLRA 151)Thick Dark Surface (A12)Iron-Manganese Masses (F12) (LRR O, P, Coast Prairie Redox (A16) (MLRA 150A)Sandy Mucky Mineral (S1) (LRR O, S)Delta Ochric (F17) (MLRA 151)Sandy Gleyed Matrix (S4)Reduced Vertic (F18) (MLRA 150A, 150BSandy Redox (S5)Piedmont Floodplain Soils (F19) (MLRA 14Stripped Matrix (S6)Anomalous Bright Loamy Soils (F20) (MLRA 14				; U) O) RR O, P, T) J) MA, 150B) MLRA 149A	 2 cm Muck (A10) (LRR S) Reduced Vertic (F18) (outside MLRA 150// Piedmont Floodplain Soils (F19) (LRR P, S) Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) P, T) ³ Indicators of hydropphobic vegetation and wetland hydrology must be present. unless disturbed or problematic. OB)			
	Туре:									
Depth (inches): Hydric Soil Present? Yes X	Depth (inc	hes):						Hydric Soil Pres	ent? Yes X No	
Remarks:	Remarks:									

Project/Site:	REDI Arkansas	City/County: Homan Townsh	ip, Texarkana, Miller Count 🖇	Sampling Date: 03/03/2021
Applicant/Owner:	AR-TX REDI		· · · · · · · · · · · · · · · · · · ·	Sampling Point: UDP-6
Investigator(s):	Roger Willis	Section, Township, Range:		
Landform (hillslope, terrace, etc):	pasture	Local relief (concave, convex	, none): none	Slope (%): 0
Subregion (LRR or MLRA):			Long: -93.878508	Datum: WGS 1984
Soil Map Unit Name:	Bossier clay, 0 to 1 per	rcent slopes	NWI classification	n: Non-wetland
Are climatic / hydrologic conditions	on the site typical for this time of year?	Yes No X	(If no, explain in Remarks.	.)
Are Vegetation , Soil	, or Hydrologysignifican	tly disturbed? Are "No	ormal Circumstances" presen	t? Yes X No
Are Vegetation, Soil	, or Hydrologynaturally p	problematic? (If need	ded, explain any answers in R	Remarks.)
SUMMARY OF FINDINGS	- Attach site map showing sar	npling point locations, f	transects, important fe	eatures, etc.
Hydrophytic Vegetation Present?	? Yes No X			
Hydric Soil Present?	Yes X No		rea	
Wetland Hydrology Present?	Yes No X	within a Wetland		No X
, , , , , , , , , , , , , , , , , , , ,				
Remarks: High precipitation ir	n proceeding weeks			
	T preceding weeks			
HYDROLOGY				
Wetland Hydrology Indicators				
	one required: check all that apply)		Secondary Indicate	ors (minimum of two required)
Surface Water (A1)	Aquatic Fau	na (B13)	Surface Soil (· · · /
High Water Table (A2)		ts (B15) (LRR U)		etated Concave Surface (B8)
Saturation (A3)		ulfide Odor (C1)	Drainage Patt	
Water Marks (B1)		izospheres along Living Roots (
Sediment Deposits (B2)		Reduced Iron (C4)	. ,	Water Table (C2)
Drift Deposits (B3)		Reduction in Tilled Soils (C6)	Crayfish Burro	· ,
Algal Mat or Crust (B4)	Thin Muck S			sible on Aerial Imagery (C9)
Iron Deposits (B5)		ain in Remarks)	Geomorphic F	
Inundation Visible on Aerial		,	Shallow Aquit	
Water-Stained Leaves (B9)			FAC-Neutral	
				loss (D8) (LRR T, U)
Field Observations:				
Surface Water Present?	Yes No X Depth (incl	·		
Water Table Present?	Yes <u>No X</u> Depth (inch	·		
Saturation Present?	Yes <u>No X</u> Depth (incl	vveti	and Hydrology Present?	Yes <u>No X</u>
(includes capillary fringe)				
Describe Recorded Data (stream	n gauge, monitoring well, aerial photos,	previous inspection), if available	ə:	
	<u> </u>			<u> </u>
Remarks:				

VEGETATION (Four Strata) - Use scientific names of plants

/EGETATION (Four Strata) - Use scientific name	s of plant	s.		Sampling Point: UDP-6	
<u>Tree Stratum</u> (Plot size:r=30') 1	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)	
2. 3. 4.		·		Total Number of Dominant Species Across All Strata: 1 (B)	
5. 6. 7.		·		Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/E	3)
8	0	= Total Cov	er	Prevalence Index worksheet: Total % Cover of: Multiply by:	
50% of total cover: 0	20% c	of total cover:	0		
Sapling/Shrub Stratum (Plot size: r=20')				· · · · · · · · · · · · · · · · · · ·	
1 2.				FAC species $0 \times 3 = 0$	
				FACU species 100 x 4 = 400	
3				UPL species 50 x 5 = 250	
4 5.				Column Totals: <u>150</u> (A) <u>650</u> (E	3)
6.				Prevalence Index = B/A =4.33	
7					
8				Hydrophytic Vegetation Indicators:	
	0	= Total Cov		1 - Rapid Test for Hydrophytic Vegetation	
50% of total cover:0	20% c	of total cover:	0	2 - Dominance Test is >50%	
Herb Stratum (Plot size: 1 square meter)				3 - Prevalence Index ≤3.0¹	
1. Cynodon dactylon / Bermuda grass	100	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)	
2. Medicago minima / Small bur clover, Burclover	25	No	UPL		
3. Festuca versuta / Texas fescue	20	No	UPL	¹ Indicators of hydric soil and wetland hydrology must	
4. Physalis heterophylla / Clammy groundcherry	5	No	UPL	be present, unless disturbed or problematic.	
5					
6				Definitions of Four Vegetation Strata:	
7				Trans Marchards and discussions (7.0 and) and	
8	_			Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or	
9		<u>.</u>	<u> </u>	more in diameter at breast height (DBH), regardless of	
10				height.	
11					
12				Sapling/Shrub – Woody plants, excluding vines, less	
	150	= Total Cov	er	than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
50% of total cover: 75	20% c	of total cover:	30		
Woody Vine Stratum (Plot size:				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2.					
3.				Woody vine - All woody vines greater than 3.28 ft in	
4.		·		height.	
5.		·			
	0	= Total Cov	er	Hydrophytic	
50% of total cover: 0		of total cover:		Vegetation	
	20700			Present? Yes No X	
Demonic (if show and list manufalogical adaptions holes)				1	

S	O	11	

Sampling Point: UDP-6

Depth	ription: (Describe to t Matrix	-		Features			_	-
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	7.5YR 3/2	90	7.5YR 6/8	10	<u>C</u>	M,PL	silty clay loam	
		·			·			
īype: C=Co	ncentration, D=Depletic	on, RM=Redu	ced Matrix, MS=Mask	ed Sand Gr	rains.		2Locat	ion: PL=Pore Lining, M=Matrix.
Histosol Histic E Black H Hydroge Stratifie Organic 5 cm Mu Muck Pr 1 cm Mu Deplete Thick Da Coast P Sandy N Sandy C Sandy F Stripped	Indicators: (Applicable (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) Bodies (A6) (LRR P, T ucky Mineral (A7) (LRF resence (A8) (LRR U) uck (A9) (LRR P, T) d Below Dark Surface (ark Surface (A12) trairie Redox (A16) (MI Mucky Mineral (S1) (LF Gleyed Matrix (S4) Redox (S5) d Matrix (S6) urface (S7) (LRR P, S,	, U) R P, T, U) A11) LRA 150A) RR O, S)	Polyvalue B Thin Dark S Loamy Muc Loamy Gley Depleted Mi X Redox Dark Depleted Da Redox Depr Marl (F10) Depleted Od Iron-Mangai Umbric Surf Delta Ochric Reduced Ve Piedmont F	elow Surfac urface (S9) ky Mineral (ed Matrix (F3) Surface (F ark Surface (LRR U) Chric (F11) nese Masse ace (F13) c (F17) (MI ertic (F18) oodplain So	(LRR S, T (F1) (LRR F2) 6) (F7) 3) (MLRA 157 (LRR P, T, -RA 151) (MLRA 150 (Dills (F19) (I	r, U) O) RR O, P, T U) DA, 150B) MLRA 149) 1 cm I 2 cm I Reduc Piedm Anom (MLRJ Red P Very S Other) ³ Indicate weth unle	for Problematic Hydric Soils ³ : Muck (A9) (LRR O) Muck (A10) (LRR S) ced Vertic (F18) (outside MLRA 150A,B) cont Floodplain Soils (F19) (LRR P, S, T) alous Bright Loamy Soils (F20) A 153B) Parent Material (TF2) Shallow Dark Surface (TF12) (Explain in Remarks) ors of hydropphobic vegetation and and hydrology must be present. ss disturbed or problematic. 3D)
testrictive L Type: Depth (in	Layer (if present):						Hydric Soil Pr	resent? Yes X No
Remarks:								

Project/Site:	REDI Arkansas	C	City/Coun	nty: Homan To	wnship, Texark	kana, Miller Count	Sampling Da	te: 03/03/2021
Applicant/Owner:		-TX REDI				ate: Arkansas		
Investigator(s):	Roger Willis	S	Section, 1	Township, Ran	ge:			
Landform (hillslope, terrace, etc):	pasture	L	Local relie	ef (concave, co	onvex, none):	none	S	Slope (%): 0
Subregion (LRR or MLRA):		Lat:			Long:	-93.87719	C	Datum: WGS 1984
Soil Map Unit Name:		am, 0 to 1 perce	ent slopes	s		NWI classificatio	n:	Non-wetland
Are climatic / hydrologic conditions	on the site typical for this f	time of year? Y	Yes	No	X (If no,	explain in Remarks	s.)	
Are Vegetation, Soil	, or Hydrology	significantly of	disturbed	1? A	re "Normal Circ	cumstances" prese	nt? Yes	X No
	, or Hydrology				f needed, expla	ain any answers in	Remarks.)	
SUMMARY OF FINDINGS -					ns, transec	ts, important f	eatures, e	tc.
Hydrophytic Vegetation Present?	Yes	No X						
Hydric Soil Present?		No X		Is the Samp	led Area			
Wetland Hydrology Present?	Yes X			within a We		Yes	No	х
, , , , , , , , , , , , , , , , , , , ,								
Remarks:	nno o din n wo dro							
High precipitation in	preceaing weeks							
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of o		t apply)				Secondary Indica	tors (minimun	n of two required)
X Surface Water (A1)	1	Aquatic Fauna ((B13)			Surface Soil		
High Water Table (A2)		Marl Deposits (I	. ,	RR U)			. ,	ave Surface (B8)
Saturation (A3)		Hydrogen Sulfid	. , .	-		Drainage Pa		· · · ·
Water Marks (B1)		Oxidized Rhizos			oots (C3)	Moss Trim L		
Sediment Deposits (B2)	_	Presence of Re	educed Iro	on (C4)		Dry-Season	Water Table (C2)
Drift Deposits (B3)	_	Recent Iron Rec		()	C6)	Crayfish Bur		,
Algal Mat or Crust (B4)	_	Thin Muck Surfa		•	,		. ,	al Imagery (C9)
Iron Deposits (B5)	_	Other (Explain i					Position (D2)	
Inundation Visible on Aerial				,		Shallow Aqu	()	
Water-Stained Leaves (B9)						FAC-Neutral	• •	
							noss (D8) (LI	RR T, U)
							. , .	
Field Observations:								
Surface Water Present?	Yes X No	Depth (inches		2				
Water Table Present?	Yes <u>No X</u>	=	·					
Saturation Present?	Yes <u>No X</u>	Depth (inches)	s):		Wetland Hyd	rology Present?	Yes 🔰	KNo
(includes capillary fringe)								
Describe Recorded Data (stream	gauge, monitoring well, a	erial photos, pre	evious ins	spection), if av	ailable:			
, , , , , , , , , , , , , , , , , , ,				. ,,				
Remarks:								

VEGETATION (Four Strata) Use scientific - n - n of plant

/EGETATION (Four Strata) - Use scientific name	s of plant	s.			Sam	pling Point	t: <u>T5</u>	DP1
Tree Stratum (Plot size: r=30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test w Number of Domina That Are OBL, FAC	nt Species		0	(A)
				That Are OBE, TAC	, or i AC.		0	_ (~)
				Total Number of Do	ominant			
				Species Across All	Strata:		2	(B)
4. 5.								
6.				Percent of Dominal	•			
7.				That Are OBL, FAC	CW, or FAC:		0.0	(A/B)
8				Prevalence Index	worksheet:			
	0	= Total Cove	er	Total % Cover	r of:	Mu	ltiply by:	
50% of total cover: 0	20% d	of total cover:	0	OBL species	0	x 1 =	0	
Sapling/Shrub Stratum (Plot size: r=20')				FACW species	0	x 2 =	0	
1				FAC species	5	x 3 =	15	
2				FACU species	85	x 4 =	340	
3				UPL species	65	x 5 =	325	
4				Column Totals:	155	(A)	680	(B)
5			- <u> </u>					
6				Prevalence Ir	ndex = B/A =	:	4.39	
7					4 - 4 ¹ 11 ¹ -	-4		
8		- Tatal Car		Hydrophytic Vege			ation	
E0% of total covery	0	= Total Cove		1 - Rapid Test 2 - Dominance	• •		auon	
50% of total cover: <u>0</u> Herb Stratum (Plot size: 1 square meter)	20% d	of total cover:	0	3 - Prevalence				
1. Cynodon dactylon / Bermuda grass	85	Yes	FACU	Problematic H			(Evalaia)	
Cynodon dactyfon'r Bernidda grass Festuca versuta / Texas fescue	<u>85</u>	Yes	UPL		yuropriyuc v	egetation	(Explain)	
3. <i>Medicago minima /</i> Small bur clover, Burclover	<u></u>	No	UPL	¹ Indicators of hydrid	c soil and we	tland hydr		+
4. <i>Rumex crispus /</i> Curly dock	5	No	FAC	be present, unless		-	•••	
						problema		
6				Definitions of Fou	r Vegetation	n Strata:		
7								
8.				Tree – Woody plan	ts, excluding	vines, 3 i	n. (7.6 cm)	or
9.				more in diameter a	t breast heig	ht (DBH),	regardless	of
10.				height.				
11.								
12.		_		Sapling/Shrub – V				ss
	155	= Total Cove	er	than 3 in. DBH and	greater than	n 3.28 ft (1	m) tall.	
50% of total cover: 77	20% (- of total cover:	31					
Woody Vine Stratum (Plot size: r=20')				Herb – All herbace	ous (non-wo	ody) plant	s, regardle	ss
1				of size, and woody	plants less t	han 3.28 f	t tall.	
2.								
3				Woody vine – All v	voody vines	greater the	an 3.28 ft ii	n
4				height.				
5				Hydrophytic				
	0	= Total Cove	er	inguiophigue				
	0	-		Vegetation				
50% of total cover:0		of total cover:		Vegetation Present?	Yes	No	¥	

SOIL

(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Rema	rks
0-16	7.5YR 4/4	100					sandy clay		
							<u> </u>		
Гуре: С=Со	ncentration, D=Depletio	n, RM=Reduce	d Matrix, MS=Mas	sked Sand Gr	ains.		² Location: F	PL=Pore Lining, I	V=Matrix.
vdric Soil I	ndicators: (Applicable	to all I RRs. u	Inless otherwise	noted)			Indicators for F	roblematic Hvd	ric Soils ³
Histosol				Below Surfac	ce (S8) (LR	R S. T. U)		(A9) (LRR O)	
	pipedon (A2)			Surface (S9)	· , ·			(A10) (LRR S)	
	stic (A3)			ucky Mineral (ide MLRA 150A,
Hydroge	en Sulfide (A4)		Loamy Gl	eyed Matrix (F	=2)				F19) (LRR P, S, 1
Stratified	d Layers (A5)		Depleted	Matrix (F3)			Anomalous	Bright Loamy So	oils (F20)
Organic	Bodies (A6) (LRR P, T,	, U)		rk Surface (F	,		(MLRA 153	B)	
5 cm Mı	ucky Mineral (A7) (LRR	t P, T, U)		Dark Surface				Material (TF2)	
	resence (A8) (LRR U)			pressions (F8	3)			w Dark Surface	(TF12)
	ick (A9) (LRR P, T)) (LRR U)			Other (Exp	ain in Remarks)	
	d Below Dark Surface (A11)	·	Ochric (F11)	•		a ,,		
	ark Surface (A12)	D. 450.4		anese Masse	· /·			hydropphobic ve	0
	rairie Redox (A16) (ML			urface (F13)	• • •	J)		ydrology must be	
	/lucky Mineral (S1) (LR Gleyed Matrix (S4)	(R U, S)		ric (F17) (ML Vertic (F18)		A 450D)	uniess dis	turbed or proble	matic.
	Redox (S5)			Floodplain So	•		•)		
	Matrix (S6)			•	· /·		-) 149A, 153C, 153D)		
	rface (S7) (LRR P, S , ⁻	T. U)		is Dright Loan	ny 00113 (1 Z		1454, 1880, 1880)		
		, -,							
	ayer (if present):								
Type:							Undria Cail Dreason		No. V
Depth (in	cnes):						Hydric Soil Presen	t? Yes	No <u>X</u>
Remarks:									

Project/Site:	REDI Arkansas		City/Cou	nty: Homan T	lownship, Texa	rkana, Miller Count	Sampling D	Date: 0	3/03/2021
Applicant/Owner:		R-TX REDI	-			tate: Arkansas			WDP-7
Investigator(s):	Roger Willis		Section,	Township, Ra	inge:				
Landform (hillslope, terrace, etc):	pond		Local reli	ief (concave,	convex, none):	concave	;	Slope (%)): 0
Subregion (LRR or MLRA):		Lat:	33	.548507	Long:	-93.874024		Datum:	WGS 1984
Soil Map Unit Name:		Water				NWI classificatio	n:	PUBH	łx
Are climatic / hydrologic conditions of	on the site typical for this	time of year?	Yes	No	X (If no	, explain in Remark	s.)		
Are Vegetation, Soil					Are "Normal Ci	rcumstances" prese	nt? Ye	s X	No
Are Vegetation, Soil	, or Hydrology	naturally pro	oblematic	?	(If needed, exp	lain any answers in	Remarks.)		
SUMMARY OF FINDINGS -	Attach site map sh	nowing sam	pling p	oint locati	ons, transe	cts, important	features,	etc.	
Hydrophytic Vegetation Present?	Yes X	No							
Hydric Soil Present?	Yes X	No	_	Is the Sam	pled Area				
Wetland Hydrology Present?	Yes X		_	within a W	•	Yes X	No		
Remarks: High precipitation in	preceding weeks								
HYDROLOGY									
Wetland Hydrology Indicators:									
Primary Indicators (minimum of o	•					Secondary Indica			required)
X Surface Water (A1)	<u>X</u>	Aquatic Fauna	. ,			Surface Soil			(50)
High Water Table (A2)	—	Marl Deposits	. , .	-		Sparsely Ve			ace (B8)
Saturation (A3)	—	Hydrogen Sulf				Drainage Pa)	
Water Marks (B1)	—	Oxidized Rhize			Roots (C3)	Moss Trim L	. ,	- (00)	
Sediment Deposits (B2)	—	Presence of R			(00)	Dry-Season		3 (C2)	
Drift Deposits (B3)	—	Recent Iron Re			(C6)	Crayfish Bur	. ,		
X Algal Mat or Crust (B4)		Thin Muck Sur				Saturation V		-	y (C9)
Iron Deposits (B5)		Other (Explain	i in Rema	rks)		Geomorphic		2)	
X Inundation Visible on Aerial I	magery (B7)					Shallow Aqu X FAC-Neutral			
X Water-Stained Leaves (B9)						Sphagnum r		LRR T, U)	
Field Observations:						1 0	() (
Surface Water Present?	Yes X No	Depth (inche	es).	6					
Water Table Present?	Yes No X		·	0					
Saturation Present?	Yes No X	Depth (inche	-		Wetland Hy	drology Present?	Yes	X N	0
(includes capillary fringe)					Wettand Hy	arology riesent.	100	<u></u> 10	·
(includes outpinary ininge)									
Describe Recorded Data (stream	gauge, monitoring well,	aerial photos, pr	revious in	spection), if a	vailable:				
Remarks:									

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

Tree Stratum (Plot size:	VEGETATION (Four Strata) - Use scientific names	s of plant	s.		Samp	ling Point:	: WI	DP-7
Tete Stratum (Pid size:								
1. Duras crassrolar / Cedar elm 20 Yes FAC 3							3	(A)
3.		20	Yes	FAC				_ ()
4.					Total Number of Dominant			
4.		· ·			Species Across All Strata:		3	(B)
6.		· ·						_ ()
0.					Percent of Dominant Species			
7.							100.0	(A/B)
	7							_ (' ')
Solve of total cover: 1020% of total cover: 4Multiply Up.Septing/Shrub Stratum(Plot size: $r=20^{\circ}$)7.1201	8		- Total Cav		Prevalence Index worksheet:			
Saping/Shrub Stratum (Plot size:			-			Mul	tiply by:	
1		20% 0	of total cover:	4	OBL species 20	x 1 =	20	
2					FACW species 15	x 2 =	30	
3.					FAC species 20	x 3 =	60	
4.					FACU species 0	x 4 =	0	
5.					UPL species 0	x 5 =	0	
6.					Column Totals: 55	(A)	110	(B)
7.								
8.		·			Prevalence Index = B/A =		2.0	
0 = Total Cover 1 - Rapid Test for Hydrophytic Vegetation Netro Stratum (Plot size:								
50% of total cover: 0 20% of total cover: 0 X 2 - Dominance Test is >50% Herb Stratum (Plot size: 1 square meter) 20 Yes OBL X 3 - Prevalence Index ≤3.01 1. Ludwigia peploides / Marsh purslane 20 Yes OBL Problematic Hydrophytic Vegetation' (Explain) 2. Polygonum lapathifolium / Curlytop knotweed 15 Yes FACW 3.	8							
Herb Stratum (Plot size: 1 square meter) X 3 - Prevalence Index ≤3.01 1. Ludwigia pepioides / Marsh purslane 20 Yes OBL 2. Polygonum lapathilolium / Curtytop knotweed 15 Yes FACW 3.			-			-	ation	
1. Ludwigia pepioides / Marsh purslane 20 Yes OBL Problematic Hydrophytic Vegetation1 (Explain) 2. Polygonum lapathifolium / Curtytop knotweed 15 Yes FACW 'Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 4.		20% (of total cover:	0)		
2. Polygonum lapathifolium / Curlytop knotweed 15 Yes FACW 3.							<i></i>	
3.					Problematic Hydrophytic Ve	getation	(Explain)	
4.								
5.								t
6.					be present, unless disturbed or p	roblemat	IC.	
7.					Definitions of Four Vegetation	Strata:		
8.					Dominione er i eur regetation	on ata.		
9.					Tree – Woody plants, excluding	vines 3 ir	n (76 cm)	or
10.								
11.	9					(8811), 1	ogaraiooo	01
12.					noight			
12. 35 = Total Cover 50% of total cover: 17 20% of total cover: 7 Woody Vine Stratum (Plot size: r=20' 7 1. - - - 2. - - - 3. - - - 4. - - - 5. - - - 50% of total cover: 0 = Total Cover - 0. = Total Cover 0 = Total Cover 0. = Total Cover 0 - 50% of total cover: 0 20% of total cover: 0 9 = Total Cover 0 - - 9 = Total Cover 0 - - 50% of total cover: 0 20% of total cover: 0 - 9 = Total Cover 0 - - - 9 = Total Cover 0 - - No 9 = Total Cover 0 - - No 10 = Tot					Sanling/Shrub - Woody plants	excluding	ı vines les	29
Some instance Some instance Some instance Tender cover Tender cover	12					-	-	
Woody Vine Stratum (Plot size:r=20') 1.			-		than o in DBH and greater than	0.20 11 (1	ini) tan.	
<tbody (riot="" size:<="" strating="" td="" vine=""><td></td><td> 20% (</td><td>of total cover:</td><td>7</td><td>Herb - All herbaceous (non-woo</td><td>dv) plants</td><td>a regardle</td><td></td></tbody>		20% (of total cover:	7	Herb - All herbaceous (non-woo	dv) plants	a regardle	
1.					```			
3.					or size, and woody plants less th	un 0.20 h	. tun.	
6.	2				Woody vine - All woody vines of	reater the	an 3 28 ft i	n
4.		·					an 0.20 it i	
0 = Total Cover Hydrophytic 50% of total cover: 0 20% of total cover: 0 Present? Yes X					neight.			
50% of total cover: 0 20% of total cover: 0 Vegetation Fresent? Yes X No	5	·			Hydrophytic			
50% of total cover: 0 20% of total cover: 0 Present? Yes X No			-					
	50% of total cover: 0	20% (of total cover:	0	_	No		
	Demonstra (if show and list manufactorized adaptions below)					<u> </u>		

S	O	11	

0-16 7.5YR 6/1 80		e (S8) (LRR (LRR S, T, I F1) (LRR O)	M	Indicators for Pr 1 cm Muck (2 cm Muck (Reduced Ver	Remarks L=Pore Lining, M=Matrix. roblematic Hydric Soils ³ : (A9) (LRR O) (A10) (LRR S) ertic (F18) (outside MLRA 150A,B
Type: C=Concentration, D=Depletion, RM=Reduced M Iydric Soil Indicators: (Applicable to all LRRs, unlead 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)	atrix, MS=Masked Sand Gra ss otherwise noted.) Polyvalue Below Surface Thin Dark Surface (S9) Loamy Mucky Mineral (F Loamy Gleyed Matrix (F3)	ains. (LRR S, T, U F1) (LRR O)	R S, T, U)	² Location: Pl ² Location: Pl Indicators for Pr 1 cm Muck (2 cm Muck (Reduced Ven	roblematic Hydric Soils ³ : (A9) (LRR O) (A10) (LRR S) rrtic (F18) (outside MLRA 150A,B
ydric Soil Indicators: (Applicable to all LRRs, unlea 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)	ss otherwise noted.) Polyvalue Below Surface Thin Dark Surface (S9) Loamy Mucky Mineral (F Loamy Gleyed Matrix (F3)	e (S8) (LRR (LRR S, T, I F1) (LRR O)	U)	Indicators for Pr 1 cm Muck (2 cm Muck (Reduced Ver	roblematic Hydric Soils ³ : (A9) (LRR O) (A10) (LRR S) rrtic (F18) (outside MLRA 150A,B
Indicators: (Applicable to all LRRs, unleaded by the state of the	ss otherwise noted.) Polyvalue Below Surface Thin Dark Surface (S9) Loamy Mucky Mineral (F Loamy Gleyed Matrix (F3)	e (S8) (LRR (LRR S, T, I F1) (LRR O)	U)	Indicators for Pr 1 cm Muck (2 cm Muck (Reduced Ver	roblematic Hydric Soils ³ : (A9) (LRR O) (A10) (LRR S) rrtic (F18) (outside MLRA 150A,B
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)	Polyvalue Below Surface Thin Dark Surface (S9) Loamy Mucky Mineral (F Loamy Gleyed Matrix (F3)	(LRR S, T, U F1) (LRR O)	U)	1 cm Muck (/ 2 cm Muck (/ Reduced Ver	(A9) (LRR 0) (A10) (LRR S) rrtic (F18) (outside MLRA 150A,B
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)	Depleted Dark Surface (Redox Depressions (F8) Marl (F10) (LRR U) Depleted Ochric (F11) (I Iron-Manganese Masses Umbric Surface (F13) (I Delta Ochric (F17) (MLI Reduced Vertic (F18) (I Piedmont Floodplain Soi Anomalous Bright Loam	(F7) (MLRA 151) (S (F12) (LRR (LRR P, T, U) .RA 151) (MLRA 150A) (MLRA 150A)	, 150B) _RA 149A)	Anomalous E (MLRA 153E Red Parent I Very Shallow Other (Expla ³ Indicators of I wetland hy unless dist	oodplain Soils (F19) (LRR P, S, T) Bright Loamy Soils (F20) B) Material (TF2) w Dark Surface (TF12) ain in Remarks) hydropphobic vegetation and vdrology must be present. turbed or problematic.
estrictive Layer (if present): Type: Depth (inches):				Hydric Soil Present	? Yes X No

Project/Site:	REDI Arkansas	City/C	ounty: Homan ⁻	Township, Texarl	kana, Miller Count	Sampling D	Date: 03/03/2021	
	AR-TX		·			Sampling P		
Investigator(s):	Roger Willis	Sectio	on, Township, Ra	ange:				
Landform (hillslope, terrace, etc):	pasture	Local	relief (concave,	convex, none):	none		Slope (%): 0	
Subregion (LRR or MLRA):	LRR P	Lat:	33.547968	Long:	-93.873814		Datum: WGS 198	4
Soil Map Unit Name:		, 0 to 1 percent slo	opes		NWI classificatio	n:	Non-wetland	
Are climatic / hydrologic conditions of				X (If no,	explain in Remarks	s.)		
Are Vegetation, Soil					cumstances" preser		s X No	
	, or Hydrologyi	-			ain any answers in l			
SUMMARY OF FINDINGS - A	Attach site map show	/ing sampling	point locati	ions, transec	ts, important f	eatures,	etc.	
Hydrophytic Vegetation Present?	Yes N	lo <u>X</u>						
Hydric Soil Present?	Yes N		Is the Sam	pled Area				
Wetland Hydrology Present?	Yes N	lo X	within a W	/etland?	Yes	No	X	
Remarks: High precipitation in p	preceding weeks							
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of on	e required: check all that ap	pply)			Secondary Indica	tors (minimι	um of two required)	_
Surface Water (A1)	Aq	luatic Fauna (B13))		Surface Soil	Cracks (B6))	-
High Water Table (A2)		arl Deposits (B15)					icave Surface (B8)	
Saturation (A3)		drogen Sulfide Od	. ,		Drainage Pa		ł	
Water Marks (B1)		kidized Rhizospher		Roots (C3)	Moss Trim Li	. ,	(20)	
Sediment Deposits (B2)		esence of Reduce	()		Dry-Season		; (C2)	
Drift Deposits (B3)		cent Iron Reductio		(C6)	Crayfish Bur	. ,		
Algal Mat or Crust (B4) Iron Deposits (B5)		in Muck Surface (0 her (Explain in Rei	,		Geomorphic		rial Imagery (C9) 2)	
Inundation Visible on Aerial Ir			marksj		Shallow Aqu		2)	
Water-Stained Leaves (B9)	agery (Dr)				FAC-Neutral	• •		
					Sphagnum n		LRR T. U)	
				1	· -		· .	
Field Observations:								
		Depth (inches):						
		Depth (inches):		Wetland Hud		Vee	No. V	
	Yes <u>No X</u> D	Depth (inches):		wetiand Hyu	rology Present?	Yes	No <u>X</u>	
(includes capillary fringe)								
Describe Recorded Data (stream g	Jauge, monitoring well, aeria	al photos, previous	inspection), if a	available:				
Remarks:								
								j

VEGETATION (Four Strata) - Use scientific names of plants

/EGETATION (Four Strata) - Use scientific names	s of plants	5.		Sampling Point: UDP-7
<u>Tree Stratum</u> (Plot size: <u>r=30'</u>) 1	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2. 3. 4.				Total Number of Dominant Species Across All Strata: 2 (B)
5 6 7				Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)
8	0	= Total Cov	er	Prevalence Index worksheet: Total % Cover of: Multiply by:
50% of total cover: 0	20% c	of total cover:	0	$\frac{1}{\text{OBL species}} \qquad 0 \qquad \text{x 1 = } 0$
Sapling/Shrub Stratum (Plot size: r=20')				FACW species 0×1^{-1} 0×2^{-1}
1/				FAC species $0 \times 2 = 0$ FAC species $0 \times 3 = 0$
2.				· · · · · · · · · · · · · · · · · · ·
3.				· · · · · · · · · · · · · · · · · · ·
1				UPL species $55 \times 5 = 275$
4 5.				Column Totals: <u>140</u> (A) <u>615</u> (B)
6.				Prevalence Index = B/A =
7				
8		Tabal Oas		Hydrophytic Vegetation Indicators:
	0	= Total Cove		1 - Rapid Test for Hydrophytic Vegetation
	20% c	of total cover:	0	2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>1 square meter</u>)				3 - Prevalence Index ≤3.01
1. Cynodon dactylon / Bermuda grass	85	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Festuca versuta / Texas fescue	35	Yes	UPL	
3. Medicago minima / Small bur clover, Burclover	20	No	UPL	¹ Indicators of hydric soil and wetland hydrology must
4	<u> </u>			be present, unless disturbed or problematic.
5			<u></u>	
6				Definitions of Four Vegetation Strata:
7				
8	_			Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
9				more in diameter at breast height (DBH), regardless of
10				height.
11.				
12.				Sapling/Shrub – Woody plants, excluding vines, less
	140	= Total Cov	er	than 3 in. DBH and greater than 3.28 ft (1 m) tall.
50% of total cover: 70	20% c	of total cover:	28	
Woody Vine Stratum (Plot size: r=20') 1.				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
2.	-			
3.				Woody vine – All woody vines greater than 3.28 ft in
1				height.
4 5.				
J	0	= Total Cove		Hydrophytic
				Vegetation
50% of total cover: 0	20% C	of total cover:	0	Present? Yes No X
Develop (# characteristic lands of the second state of the second				

SOIL

(inches) Color (moist) % Type! Loc ² Texture Remarks 0-16 7.SYR 4/4 100	Profile Desc Depth	ription: (Describe to th Matrix	e depth need		ne indicator or confin « Features	m the abser	nce of indicators.)		
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ?Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils?: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Black Histic (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A9) (LRR O) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A) Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, S, T41Hed Layers (A5) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (MLRA 153B) Stratified Layers (A5) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck Presence (A8) (LRR V) Redox Dark Surface (F7) Red Parent Material (TF2) Muck Presence (A8) (LRR A 150A) Umbric Surface (F13) (LRR O, P, T) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F13) (MLRA 150A) Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR O, S) Deleta Ochric (F13) (MLRA 150A) unbric Surface (F13) (LRR A 150A) Sandy Mucky Mineral (S1) (LRR O, S) Deleta Ochric (F13) (MLRA 150A), Sandy Mucky Mineral (S1) Piedmont Floodplain Soils (F19) (MLRA	(inches)	Color (moist)	%	Color (moist)	% Type ¹	Loc ²	Texture	Remai	ks
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck (A9) (LRR P, T) Depleted Ochric (F11) (MLRA 151) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) other (Explain in Remarks) Depleted Below Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F13) (MLRA 150A, 150B) other (Explain in Remarks) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A), 153C, 153D) park Surf	0-16	7.5YR 4/4	100				sandy clay		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck (A9) (LRR P, T) Depleted Ochric (F11) (MLRA 151) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) other (Explain in Remarks) Depleted Below Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F13) (MLRA 150A, 150B) other (Explain in Remarks) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A), 153C, 153D) park Surf							<u> </u>		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck (A9) (LRR P, T) Depleted Ochric (F11) (MLRA 151) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) other (Explain in Remarks) Depleted Below Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F13) (MLRA 150A, 150B) other (Explain in Remarks) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A), 153C, 153D) park Surf									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) Damy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Anomalous Bright Loamy Soils (F20) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck (A9) (LRR P, T) Depleted Dark Surface (F10) Wery Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Cohric (F11) (MLRA 151) other (Explain in Remarks) Mard (Falo (K16) Umbric Surface (F13) (LRR P, T, U) other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F20) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A), 153C, 153D) <									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck (A9) (LRR P, T) Depleted Ochric (F11) (MLRA 151) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) other (Explain in Remarks) Depleted Below Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F13) (MLRA 150A, 150B) other (Explain in Remarks) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A), 153C, 153D) park Surf									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck (A9) (LRR P, T) Depleted Ochric (F11) (MLRA 151) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) other (Explain in Remarks) Depleted Below Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F13) (MLRA 150A, 150B) other (Explain in Remarks) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A), 153C, 153D) park Surf									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck (A9) (LRR P, T) Depleted Ochric (F11) (MLRA 151) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) other (Explain in Remarks) Depleted Below Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F13) (MLRA 150A, 150B) other (Explain in Remarks) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A), 153C, 153D) park Surf									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) 1 cm Muck (A9) (LRR O) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck (A9) (LRR P, T) Depleted Ochric (F11) (MLRA 151) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) other (Explain in Remarks) Depleted Below Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F13) (MLRA 150A, 150B) other (Explain in Remarks) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A), 153C, 153D) park Surf									
	¹ Type: C=Co	ncentration, D=Depletion	n, RM=Reduce	d Matrix, MS=Masl	ked Sand Grains.		² Location:	PL=Pore Lining, I	M=Matrix.
	Hydric Soil I	Indicators: (Applicable	to all LRRs, u	Inless otherwise r	noted.)		Indicators for I	Problematic Hyd	ric Soils ³ :
Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) 2 cm Muck (A10) (LRR S) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, T, U) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Anomalous Bright Loamy Soils (F20) Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck Presence (A8) (LRR P, T) Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Redox Depressions (F2) (LRR O, P, T) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Indicators of hydropphobic vegetation and wetland hydrology must be present. Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F13) (MLRA 150), Stripped Matrix (S4) Reduced Vertic (F18) (MLRA 149A), Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Sandy Redox (S5) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) </td <td></td> <td></td> <td>,</td> <td></td> <td></td> <td>LRR S, T, U)</td> <td></td> <td>-</td> <td></td>			,			LRR S, T, U)		-	
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Reduced Vertic (F18) (outside MLRA 150A Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S, Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck Presence (A8) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Other (Explain in Remarks) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) *Indicators of hydropphobic vegetation and wetland hydrology must be present. Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F13) (MLRA 150A, 150B) *Indicators of hydropphobic vegetation and wetland hydrology must be present. Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A) Moreal Surface (S7) (LRR P, S, T, U) Piedmont Floodplain Soils (F10) (MLRA 149A, 153C, 153D) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Depth (inches): Depth (inches): Yes No No	Histic E	pipedon (A2)		Thin Dark S	Surface (S9) (LRR S	, T, U)	2 cm Muck	(A10) (LRR S)	
Stratified Layers (A5) Depleted Matrix (F3) Anomalous Bright Loamy Soils (F20) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) other (Explain in Remarks) Coast Prairie Redox (A16) (MLRA 150A) Ion-Manganese Masses (F12) (LRR O, P, T) and indicators of hydropphobic vegetation and wetland hydrology must be present. Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F13) (MLRA 151) unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) unless disturbed or problematic. Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if present): Type: Mare (inches): Yes No	Black H	istic (A3)							ide MLRA 150A,B)
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) (MLRA 153B) 5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) other (Explain in Remarks) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) and wetland hydrology must be present. Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) anomalous Bright Loamy Soils (F20) (MLRA 149A), Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) bark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if present): Type: No > Type: Depth (inches): No >	Hydroge	en Sulfide (A4)		Loamy Gle	yed Matrix (F2)		Piedmont I	loodplain Soils (l	=19) (LRR P, S, T)
5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7) Red Parent Material (TF2) Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) other (Explain in Remarks) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) wetland hydrology must be present. Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if present): Type:	Stratifie	d Layers (A5)		Depleted N	latrix (F3)		Anomalous	Bright Loamy So	oils (F20)
Muck Presence (A8) (LRR U) Redox Depressions (F8) Very Shallow Dark Surface (TF12) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Indicators of hydropphobic vegetation and Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) wetland hydrology must be present. Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) unless disturbed or problematic. Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Hydric Soil Present? Yes No _>	Organic	Bodies (A6) (LRR P, T,	U)	Redox Dar	k Surface (F6)		(MLRA 15	3B)	
1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Indicators of hydropphobic vegetation and Coast Prairie Redox (A16) (MLRA 150A) Depleted Ochric (F13) (LRR P, T, U) wetland hydrology must be present. Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) unless disturbed or problematic. Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if present): Type:				Depleted D	Oark Surface (F7)		Red Paren	t Material (TF2)	
Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) ³Indicators of hydropphobic vegetation and Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) wetland hydrology must be present. Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) unless disturbed or problematic. Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if present): Type:				Redox Dep	pressions (F8)		Very Shallo	w Dark Surface	(TF12)
Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Indicators of hydropphobic vegetation and Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) wetland hydrology must be present. Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) unless disturbed or problematic. Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if present): Type:	1 cm Mu	uck (A9) (LRR P, T)		Marl (F10)	(LRR U)		Other (Exp	lain in Remarks)	
Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) wetland hydrology must be present. Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) unless disturbed or problematic. Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if present): Type:	Deplete	d Below Dark Surface (A	A11)	Depleted C	Ochric (F11) (MLRA 1	51)			
Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) unless disturbed or problematic. Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Piedmont Floodplain Soils (F20) (MLRA 149A, 153C, 153D) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Restrictive Layer (if present): Type: Hydric Soil Present? Yes No Xes	Thick Da	ark Surface (A12)		Iron-Manga	anese Masses (F12) (LRR O, P, T)	³ Indicators o	f hydropphobic ve	egetation and
Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Hydric Soil Present? Yes No	Coast P	rairie Redox (A16) (ML	RA 150A)	Umbric Sur	rface (F13) (LRR P, 1	, U)	wetland h	ydrology must be	e present.
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) Dark Surface (S7) (LRR P, S, T, U) Hydric Soil Present? Restrictive Layer (if present): Hydric Soil Present? Type: No Depth (inches): Yes	Sandy N	Mucky Mineral (S1) (LR	R O, S)	Delta Ochr	ic (F17) (MLRA 151)		unless di	sturbed or proble	matic.
Stripped Matrix (S6)	Sandy C	Gleyed Matrix (S4)		Reduced V	/ertic (F18) (MLRA 1	50A, 150B)			
Dark Surface (S7) (LRR P, S, T, U) Restrictive Layer (if present):	Sandy F	Redox (S5)		Piedmont F	-Ioodplain Soils (F19)	(MLRA 149)	A)		
Restrictive Layer (if present):	Stripped	d Matrix (S6)		Anomalous	Bright Loamy Soils (F20) (MLRA	149A, 153C, 153D)		
Type:	Dark Su	Irface (S7) (LRR P, S, 1	r, U)						
Depth (inches):	Restrictive L	Layer (if present):							
	Туре:								
Remarks:	Depth (in	nches):					Hydric Soil Preser	t? Yes	No X
	Pomarka:								
	Remarks.								

Project/Site:	REDI Arkansas	City/County: Homan	Township, Texa	rkana, Miller Count	Sampling Date:	03/03/2021
Applicant/Owner:	AR-TX REDI		S	itate: Arkansas	Sampling Point:	T6DP1
Investigator(s):	Roger Willis	Section, Township, Ra				
Landform (hillslope, terrace, etc):	pasture	Local relief (concave,	convex, none):	none	Slope	e (%): 0
Subregion (LRR or MLRA):			Long:		Datur	m: WGS 1984
Soil Map Unit Name:	Bossier clay, 0 to 1 p	ercent slopes		NWI classificatio	n: Non	-wetland
Are climatic / hydrologic conditions	s on the site typical for this time of year	? Yes No	X (lf no	o, explain in Remarks	s.)	
Are Vegetation, Soil	, or Hydrologysignifica	ntly disturbed?	Are "Normal Ci	ircumstances" presei	nt? Yes	X No
Are Vegetation, Soil	, or Hydrologynaturally	problematic?	(If needed, exp	lain any answers in l	Remarks.)	
SUMMARY OF FINDINGS	- Attach site map showing sa	impling point locat	ions, transe	cts, important f	features, etc.	
Hydrophytic Vegetation Present	? Yes No X					
Hydric Soil Present?			npled Area			
Wetland Hydrology Present?	Yes No X		-	Yes	NoX	
Remarks: High precipitation i	n preceding weeks	I				
HYDROLOGY						
Wetland Hydrology Indicators	:					
	one required: check all that apply)			Secondary Indica	tors (minimum of	two required)
Surface Water (A1)	Aquatic Fa	una (B13)		Surface Soil	Cracks (B6)	, ,
High Water Table (A2)	Marl Depos	sits (B15) (LRR U)		Sparsely Veg	getated Concave	Surface (B8)
Saturation (A3)	Hydrogen S	Sulfide Odor (C1)		Drainage Pa	tterns (B10)	
Water Marks (B1)	Oxidized R	hizospheres along Living	Roots (C3)	Moss Trim Li	ines (B16)	
Sediment Deposits (B2)	Presence of	of Reduced Iron (C4)		Dry-Season	Water Table (C2)	
Drift Deposits (B3)	Recent Iror	n Reduction in Tilled Soils	; (C6)	Crayfish Bur	rows (C8)	
Algal Mat or Crust (B4)	Thin Muck	Surface (C7)		Saturation V	isible on Aerial Im	agery (C9)
Iron Deposits (B5)	Other (Exp	lain in Remarks)		Geomorphic	Position (D2)	
Inundation Visible on Aeria	Imagery (B7)			Shallow Aqu	itard (D3)	
Water-Stained Leaves (B9)	1			FAC-Neutral	Test (D5)	
				Sphagnum n	noss (D8) (LRR T	, U)
Field Observations:			1			
Surface Water Present?	Yes No X Depth (in	ches).				
Water Table Present?	Yes No X Depth (in	·				
Saturation Present?	Yes No X Depth (in		Wetland Hy	drology Present?	Yes	No X
(includes capillary fringe)			Wedana Hye	arology r resent.	100	
(moldees supmary milge)						
Describe Recorded Data (stream	n gauge, monitoring well, aerial photos	, previous inspection), if a	available:			
Remarks:						

VECETATION (Four Strata) Liss scientific names of plant

/EGETATION (Four Strata) - Use scientific name	s of plant	s.			Sampling Poi	nt: <u>T6</u>	DP1
Tree Stratum (Plot size: r=30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test works Number of Dominant Sp	pecies		
				That Are OBL, FACW, o	r FAC:	0	_ (A)
2				Total Number of Domina	ant		
3				Species Across All Strat	ta:	2	(B)
4 5							
6.				Percent of Dominant Sp			
7				That Are OBL, FACW, o	r FAC:	0.0	(A/B)
8				Prevalence Index work	sheet:		
	0	-		Total % Cover of:	M	ultiply by:	
50% of total cover: 0	20%	of total cover:	0		0 x 1 =	0	
Sapling/Shrub Stratum (Plot size: r=20') 1.					0 x 2 =	0	
					$0 \times 3 =$	0	
2					x = 00	400	
4.				· · ·	$\frac{90}{x5} = $	450	(D)
5.					90 (A)	850	(B)
6.				Prevalence Index	= B/A =	4.47	
7							
8				Hydrophytic Vegetatio	n Indicators:		
	0	= Total Cov	er	1 - Rapid Test for H	lydrophytic Vege	etation	
	20%	of total cover:	0	2 - Dominance Tes			
Herb Stratum (Plot size: <u>1 square meter</u>)				3 - Prevalence Inde			
1. Cynodon dactylon / Bermuda grass	100	Yes	FACU	Problematic Hydro	ohytic Vegetatior	n¹ (Explain)	
2. Festuca versuta / Texas fescue	80	Yes	UPL				
3. Medicago minima / Small bur clover, Burclover	10	No	UPL	¹ Indicators of hydric soil	•	•••	st
4 5.				be present, unless distu	rbed or problem	atic.	
				Definitions of Four Ve	getation Strata:		
7					-		
8.				Tree – Woody plants, ex	cluding vines, 3	in. (7.6 cm)) or
9.				more in diameter at brea	ast height (DBH)	, regardless	of
10				height.			
11.							
12.				Sapling/Shrub – Wood		-	SS
	190	= Total Cov	er	than 3 in. DBH and grea	ater than 3.28 ft ((1 m) tall.	
50% of total cover: 95	20%	of total cover:	38				
Woody Vine Stratum (Plot size: r=20')				Herb – All herbaceous (of size, and woody plan			ess
1 2.							
				Woody vine – All wood	y vines greater t	han 3.28 ft i	n
				-			
3.				height.			
3			- <u> </u>				
3.		= Total Cov	er	Hydrophytic			
3	0	= Total Cov		Hydrophytic Vegetation	′es N		

SOIL

(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-18	7.5YR 4/4	100					sandy clay loar		
		· ·							
Туре: С=Со	ncentration, D=Depletion	on, RM=Reduce	d Matrix, MS=Mask	ked Sand Grair	ns		² Locatio	n: PL=Pore Lining, M=Matrix.	
-	Indicators: (Applicabl	e to all LRRs, u			(00) (1			or Problematic Hydric Soils ³ :	
Histoso	()			Below Surface	. , .			ick (A9) (LRR O)	
	pipedon (A2)			Surface (S9) (•		ick (A10) (LRR S)	
	istic (A3) en Sulfide (A4)			cky Mineral (F1 yed Matrix (F2				d Vertic (F18) (outside MLRA 1 nt Floodplain Soils (F19) (LRR F	
_ ` `	d Layers (A5)		Depleted N)			bus Bright Loamy Soils (F19) (LKK F	-, 3, 1)
	Bodies (A6) (LRR P, 1		·	k Surface (F6)			(MLRA		
_ `	ucky Mineral (A7) (LRI			ark Surface (F			•	ent Material (TF2)	
	resence (A8) (LRR U)	,.,,.,		pressions (F8)	.,			allow Dark Surface (TF12)	
	uck (A9) (LRR P, T)		 Marl (F10)	()				xplain in Remarks)	
	d Below Dark Surface ((A11)) Dchric (F11) (M	LRA 151)		`	, ,	
Thick D	ark Surface (A12)		Iron-Manga	anese Masses	(F12) (LRF	O, P, T)	³ Indicators	s of hydropphobic vegetation an	nd
Coast P	Prairie Redox (A16) (M	LRA 150A)	Umbric Sur	rface (F13) (L l	RR P, T, U)		wetlan	d hydrology must be present.	
Sandy M	Mucky Mineral (S1) (LI	RR O, S)	Delta Ochri	ic (F17) (MLR	A 151)		unless	disturbed or problematic.	
Sandy (Gleyed Matrix (S4)		Reduced V	/ertic (F18) (M	LRA 150A	, 150B)			
Sandy F	Redox (S5)		Piedmont F	-loodplain Soils	s (F19) (MI	RA 149	A)		
Stripped	d Matrix (S6)		Anomalous	s Bright Loamy	Soils (F20) (MLRA	149A, 153C, 153D)	
Dark Su	urface (S7) (LRR P, S,	T, U)							
Restrictive I	Layer (if present):								
Type:									
Depth (ir	nches):						Hydric Soil Pres	sent? Yes No	Х
Remarks:							1		
Cernarks:									

Project/Site:	REDI Arkansas		City/Cour	nty: Homan	Township, Texar	kana, Miller Count	Sampling Date	e: 03/03/2021
Applicant/Owner:		-TX REDI						nt: T7DP1/WDP-8
Investigator(s):	Roger Willis		Section, -	Township, R				
Landform (hillslope, terrace, etc):	pasture		Local reli	ef (concave	convex, none):	none	SI	ope (%): 0
Subregion (LRR or MLRA):		Lat:			Long:		J De	atum: WGS 1984
Soil Map Unit Name:		0 1 percent slop	es, rarely	flooded		NWI classificatio	n: N	Non-wetland
Are climatic / hydrologic conditions	on the site typical for this	time of year?	Yes	Nc	X (If no,	, explain in Remarks	s.)	
Are Vegetation, Soil	, or Hydrology	significantly	disturbed	1?	Are "Normal Cir	cumstances" prese	nt? Yes	X No
	, or Hydrology					ain any answers in		
SUMMARY OF FINDINGS -					ions, transed	cts, important f	features, et	с.
Hydrophytic Vegetation Present?	Yes	No X						
Hydric Soil Present?		No X	-	Is the Sar	npled Area			
Wetland Hydrology Present?	Yes X		-	within a W		Yes	No >	<
		•	-					
Remarks:	proceeding weeks							
High precipitation in	preceding weeks							
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of c		t apply)				Secondary Indica	tors (minimum	of two required)
X Surface Water (A1)	· ·	Aquatic Fauna	(B13)			Surface Soil		,,,
High Water Table (A2)		Marl Deposits	. ,	RR U)			. ,	ve Surface (B8)
Saturation (A3)		Hydrogen Sulfi	. , .	-		Drainage Pa		
Water Marks (B1)	_	Oxidized Rhizo			Roots (C3)	Moss Trim L		
Sediment Deposits (B2)		Presence of R	-		· · ·	Dry-Season	Water Table (C	22)
Drift Deposits (B3)	_	Recent Iron Re		. ,	s (C6)	Crayfish Bur		,
X Algal Mat or Crust (B4)	—	Thin Muck Sur			()		isible on Aerial	Imagery (C9)
Iron Deposits (B5)	_	Other (Explain					Position (D2)	5 7 (/
Inundation Visible on Aerial	Imagery (B7)			,		Shallow Aqu	· · · ·	
Water-Stained Leaves (B9)						FAC-Neutral	. ,	
							noss (D8) (LR	R T, U)
							. , .	
Field Observations:								
Surface Water Present?	Yes X No	Depth (inches		2				
Water Table Present?	Yes <u>No X</u>	=	·					
Saturation Present?	Yes <u>No X</u>	Depth (inches	s):		Wetland Hyd	Irology Present?	Yes X	No
(includes capillary fringe)								
Describe Recorded Data (stream	auge, monitoring well, a	erial photos, pr	evious ins	spection), if	available:			
, , , , , , , , , , , , , , , , , , ,				, ,,				
Remarks:								

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

Sampling Point: T7DP1/WDP-8

	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2 3 4				Total Number of Dominant Species Across All Strata:2 (B)
5 6 7				Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)
8. 50% of total cover: 0 Sapling/Shrub Stratum (Plot size: r=20') 1.	0 20% c	of total cover:	0	Prevalence Index worksheet:Total % Cover of:Multiply by:OBL species0 $x 1 = 0$ FACW species45 $x 2 = 90$ FAC species10 $x 3 = 30$ FACU species60 $x 4 = 240$ UPL species35 $x 5 = 175$
4 5 6 7.		·		Column Totals: 150 (A) 535 (B) Prevalence Index = B/A = 3.57
7. 50% of total cover: 0 8. 50% of total cover: 0 Herb Stratum (Plot size: 1 square meter) 1. Cynodon dactylon / Bermuda grass 2. Festuca versuta / Texas fescue 3. Paspalum bifidum / Pitchfork crown grass 4. Juncus anthelatus / Poverty rush, Kentucky or poverty rush	0 20% c 60 35 25 20	= Total Cove of total cover: Yes No No	0 FACU UPL FACW FACW	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index ≤3.01 Problematic Hydrophytic Vegetation1 (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. Rumex crispus / Curly dock 6. 7. 8. 9. 10. 11.		·		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.
12. 50% of total cover: 75 Woody Vine Stratum (Plot size: r=20') 1. . 2. . 3. . 4.	150	= Total Cove of total cover:	r 30	 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.
5 50% of total cover:	0 20% c	= Total Cove of total cover:		Hydrophytic Vegetation Present? Yes NoX

SOIL

inches) 0-20 	Color (moist) 10YR 4/3	<u>%</u> 	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture clay loam	Re	emarks
	10YR 4/3				·		clay loam		
		·				<u> </u>			
/pe: C=Conce		·							
pe: C=Conce									
/pe: C=Conce		·							
pe: C=Conce									
·	entration, D=Depletio	n, RM=Reduce	d Matrix, MS=Masl	ked Sand Gra	ains.		² Location: I	PL=Pore Lini	ng, M=Matrix.
dric Soil Indi	icators: (Applicable	e to all LRRs, u	Inless otherwise r	noted.)			Indicators for F	roblematic	Hydric Soils ³ :
Histosol (A	1)		Polyvalue E	Below Surfac	e (S8) (LR	R S, T, U)	1 cm Muck	(A9) (LRR	O)
Histic Epipe	()			Surface (S9)				(A10) (LRR	
Black Histic	()			cky Mineral (I	, ,))		· / ·	outside MLRA 150A,B
Hydrogen S				yed Matrix (F	=2)				oils (F19) (LRR P, S, T)
_ Stratified La	•		Depleted N	. ,				-	ny Soils (F20)
Organic Bo	dies (A6) (LRR P, T ,	, U)		k Surface (F6	,		(MLRA 153	,	
5 cm Mucky	y Mineral (A7) (LRR	r P, T, U)	Depleted D	ark Surface	(F7)			t Material (TF	,
Muck Prese	ence (A8) (LRR U)		Redox Dep	pressions (F8	3)			w Dark Surfa	. ,
1 cm Muck	(A9) (LRR P, T)		Marl (F10)	(LRR U)			Other (Exp	lain in Rema	rks)
_ Depleted B	elow Dark Surface (A	A11)	Depleted C) Chric (F11)	(MLRA 151)			
Thick Dark	Surface (A12)		Iron-Manga	anese Masse	es (F12) (LR	R O, P, T)	³ Indicators o	f hydropphob	oic vegetation and
Coast Prair	ie Redox (A16) (ML	_RA 150A)	Umbric Sur	rface (F13) ((LRR P, T, U	J)	wetland h	ydrology mu	st be present.
Sandy Muc	ky Mineral (S1) (LR	RR O, S)	Delta Ochr	ic (F17) (ML	.RA 151)		unless di	sturbed or pro	oblematic.
Sandy Gley	/ed Matrix (S4)		Reduced V	'ertic (F18) ((MLRA 150	A, 150B)			
Sandy Red	ox (S5)		Piedmont F	loodplain Sc	oils (F19) (N	ILRA 149A	N)		
Stripped Ma	atrix (S6)		Anomalous	Bright Loam	ny Soils (F2	0) (MLRA	149A, 153C, 153D)		
Dark Surfac	ce (S7) (LRR P, S,	T, U)							
strictive Lay	er (if present):								
Туре:									
Depth (inche	es):						Hydric Soil Preser	t? Yes	NoX
emarks:									

Project/Site:	REDI Arkansas	City/County: Homan	Township, Texarka	ana, Miller Count	Sampling Dat	te: 03/03/2021
Applicant/Owner:	AR-TX REDI	<u> </u>			Sampling Poin	
Investigator(s):	Roger Willis	Section, Township, Ra	ange:			
Landform (hillslope, terrace, etc):	pasture	Local relief (concave,	convex, none):	none	S	lope (%): 0
Subregion (LRR or MLRA):				-93.864959	D	atum: WGS 1984
Soil Map Unit Name:	Rilla silt loam, 0 to 1 pe	rcent slopes		NWI classification	n: I	Non-wetland
Are climatic / hydrologic conditions c	on the site typical for this time of year?	Yes No	X (If no, e	explain in Remarks	s.)	
Are Vegetation, Soil	, or Hydrologysignificant	lly disturbed?	Are "Normal Circu	umstances" preser	nt? Yes	X No
Are Vegetation, Soil	, or Hydrologynaturally p	problematic?	(If needed, explai	in any answers in F	Remarks.)	
SUMMARY OF FINDINGS -	Attach site map showing san	npling point locati	ons, transect	ts, important f	eatures, ef	tc.
Hydrophytic Vegetation Present?	Yes No X					
Hydric Soil Present?	Yes No X		pled Area			
Wetland Hydrology Present?	Yes No X		•	Yes	No	х
Remarks: High precipitation in	preceding weeks					
HYDROLOGY						
Wetland Hydrology Indicators:						
Primary Indicators (minimum of or	ne required: check all that apply)			Secondary Indicat	tors (minimum	of two required)
Surface Water (A1)	Aquatic Faur	na (B13)		Surface Soil		/
High Water Table (A2)	·	ts (B15) (LRR U)				ave Surface (B8)
Saturation (A3)		ulfide Odor (C1)		Drainage Pat		
Water Marks (B1)		izospheres along Living	Roots (C3)	Moss Trim Li	ines (B16)	
Sediment Deposits (B2)	Presence of	Reduced Iron (C4)		Dry-Season	Water Table (0	C2)
Drift Deposits (B3)	Recent Iron	Reduction in Tilled Soils	(C6)	Crayfish Bur	rows (C8)	
Algal Mat or Crust (B4)	Thin Muck S	urface (C7)		Saturation Vi	isible on Aeria	al Imagery (C9)
Iron Deposits (B5)	Other (Expla	in in Remarks)		Geomorphic	Position (D2)	
Inundation Visible on Aerial I	magery (B7)			Shallow Aqui	itard (D3)	
Water-Stained Leaves (B9)				FAC-Neutral	Test (D5)	
				Sphagnum m	noss (D8) (LR	2R Τ, U)
Field Observations:						
Surface Water Present?	Yes No X Depth (inch	ies).				
Water Table Present?	Yes No X Depth (inch					
Saturation Present?	Yes No X Depth (inch		Wetland Hydro	ology Present?	Yes	No X
(includes capillary fringe)						
(<u> </u>			
Describe Recorded Data (stream	gauge, monitoring well, aerial photos,	previous inspection), if a	vailable:			
Remarks:						

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

/EGETATION (Four Strata) - Use scientific name	s of plant	s.		Sar	mpling Point	t: <u> </u>	DP-8
Tree Stratum (Plot size:r=30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC		0	(A)
1 2.						0	_ (//)
3.				Total Number of Dominant			
4.				Species Across All Strata:		2	(B)
5.							
6				Percent of Dominant Species That Are OBL, FACW, or FAC		0.0	
7					·	0.0	_ (A/B)
8				Prevalence Index worksheet	t:		
	0	-		Total % Cover of:	Mu	ltiply by:	
50% of total cover: 0	20%	of total cover:	0	OBL species 0	x 1 =	0	
Sapling/Shrub Stratum (Plot size: r=20')				FACW species 0	x 2 =	0	
1				FAC species 5	x 3 =	15	
2				FACU species 90	x 4 =	360	
3			·	UPL species 60	x 5 =	300	
4			·	Column Totals: 155	(A)	675	(B)
5							
6.				Prevalence Index = B/A	=	4.35	
7 8.			·	Hydrophytic Vegetation Indi			
8	0	= Total Cove		Hydrophytic Vegetation Indi 1 - Rapid Test for Hydrop		ation	
50% of total cover: 0		of total cover:		2 - Dominance Test is >5		ation	
Herb Stratum (Plot size: 1 square meter)	2070			3 - Prevalence Index ≤3.0			
1. Cynodon dactylon / Bermuda grass	90	Yes	FACU	Problematic Hydrophytic		(Evploin)	
2. Festuca versuta / Texas fescue	<u>90</u>	Yes	UPL		vegetation	(Explain)	
3. <i>Medicago minima</i> / Small bur clover, Burclover	20	No	UPL	¹ Indicators of hydric soil and w	etland bydy		ət
4. <i>Rumex crispus /</i> Curly dock	5	No No	FAC	be present, unless disturbed of	•		51
5 6.				Definitions of Four Vegetation	on Strata:		
7							
8.				Tree – Woody plants, excludir	ıg vines, 3 ir	n. (7.6 cm) or
9.				more in diameter at breast hei	ght (DBH),	regardles	s of
10				height.			
11.			·				
12.			·	Sapling/Shrub – Woody plan	ts, excluding	g vines, le	SS
	155	= Total Cove	er	than 3 in. DBH and greater that	an 3.28 ft (1	m) tall.	
50% of total cover: 77	20%	_ of total cover:	31				
Woody Vine Stratum (Plot size: r=20')				Herb – All herbaceous (non-w	oody) plant	s, regardle	ess
1				of size, and woody plants less	than 3.28 f	t tall.	
2.		_					
3.		-	·	Woody vine – All woody vine	s greater tha	an 3.28 ft	in
4.				height.			
5.							
	0	= Total Cove	er	Hydrophytic			
50% of total cover:0	20%	of total cover:		Vegetation	Ma	v	
				Present? Yes	No	<u> </u>	
Demonics (if above and list manufalencial adaptions below)							

S	O	11	

Profile Desc Depth	ription: (Describe to t Matrix	ne depth nee		e indicator of Features	or confirm	the absen	ce of indicator	s.)		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-16	7.5YR 4/4	80	7.5YR 6/8	20	C	M	clay loam			
¹ Type: C=Cor	ncentration, D=Depletio	n, RM=Reduc	ed Matrix, MS=Mask	ed Sand Gra	ains.		²Loca	tion: PL=Po	ore Lining, M=	Matrix.
Histosol Histic Ep Black Hi Hydroge Stratified Organic 5 cm Mu Muck Pr 1 cm Mu Depleted Thick Da Coast Pr Sandy M Sandy G Sandy R Stripped	ndicators: (Applicable (A1) Dipedon (A2) stic (A3) an Sulfide (A4) d Layers (A5) Bodies (A6) (LRR P, T, acky Mineral (A7) (LRR esence (A8) (LRR U) ack (A9) (LRR P, T) d Below Dark Surface (A ark Surface (A12) rairie Redox (A16) (ML Mucky Mineral (S1) (LR Bleyed Matrix (S4) Redox (S5) Matrix (S6) rface (S7) (LRR P, S,	U) P, T, U) A11) .RA 150A) .R O, S)	Polyvalue E Thin Dark S Loamy Muc Loamy Gley Depleted M Redox Dark Depleted D Redox Dep Marl (F10) Depleted O Iron-Manga Umbric Sur Delta Ochri Reduced V Piedmont F	Below Surface Surface (S9) kky Mineral (F yed Matrix (F3) surface (F6 ark Surface (F6 ark Surface (F6 ark Surface (F11) (nese Masses face (F13) (C c (F17) (ML ertic (F18) (loodplain So	(LRR S, T =1) (LRR (2) (F7)) MLRA 151 s (F12) (LR RA 151) MLRA 150 ils (F19) (M	; U) D) R O, P, T) J) A, 150B) /ILRA 149A	1 cm 2 cm Redu Piedn Anom (MLR Red F Very 5 Other 3Indicat wett unle	Muck (A9) Muck (A10 ced Vertic (nont Floodp alous Brigh A 153B) Parent Mate Shallow Da (Explain in ors of hydr and hydrole ss disturbe) (LRR S) F18) (outside blain Soils (F19 ht Loamy Soils erial (TF2) rk Surface (TF	e MLRA 150A,B) 9) (LRR P, S, T) (F20) 512) etation and resent.
Restrictive L Type: Depth (in	ayer (if present):						Hydric Soil P	resent?	Yes	NoX
Remarks:										

Project/Site:	REDI Arkansas	City/Cou	unty: Homan Township, Texar	kana, Miller Count Sampling	g Date: 03/03/2021
Applicant/Owner:		TX REDI		tate: Arkansas Sampling	
Investigator(s):	Roger Willis	Section,	, Township, Range:		-
Landform (hillslope, terrace, etc):	pond		lief (concave, convex, none):	concave	Slope (%): 0
Subregion (LRR or MLRA):	LRR P		3.548709 Long:		Datum: WGS 1984
Soil Map Unit Name:	Billyhaw clay, 0 to 1	percent slopes, rarel		NWI classification:	Non-wetland
Are climatic / hydrologic conditions c	on the site typical for this tin	ne of year? Yes	No X (If no.	, explain in Remarks.)	
Are Vegetation, Soil	, or Hydrology	significantly disturbe	Are "Normal Cir	rcumstances" present?	Yes X No
	, or Hydrology			lain any answers in Remarks.	.)
SUMMARY OF FINDINGS -	Attach site map sho	wing sampling p	point locations, transed	cts, important feature	s, etc.
Hydrophytic Vegetation Present?	Yes X	No			
Hydric Soil Present?	Yes X	No	Is the Sampled Area		
Wetland Hydrology Present?		No	within a Wetland?	Yes X No	
Remarks:					
High precipitation in	preceding weeks				
HYDROLOGY					
Wetland Hydrology Indicators:					
Primary Indicators (minimum of or	ne required: check all that c	annly)		Secondary Indicators (mini	imum of two required)
X Surface Water (A1)	1	Aquatic Fauna (B13)		Surface Soil Cracks (I	<i>`′</i>
High Water Table (A2)		/arl Deposits (B15)	I RR II)	Sparsely Vegetated C	,
Saturation (A3)		lydrogen Sulfide Odor	-	Drainage Patterns (B ²	. ,
Water Marks (B1)			s along Living Roots (C3)	Moss Trim Lines (B16	
Sediment Deposits (B2)		Presence of Reduced I		Dry-Season Water Ta	,
Drift Deposits (B3)		Recent Iron Reduction		Crayfish Burrows (C8	. ,
X Algal Mat or Crust (B4)		hin Muck Surface (C7	()	Saturation Visible on	,
Iron Deposits (B5)		Other (Explain in Rema		X Geomorphic Position	
X Inundation Visible on Aerial I			(6716	Shallow Aquitard (D3)	
Water-Stained Leaves (B9)				X FAC-Neutral Test (D5)	,
				Sphagnum moss (D8)	,
					, (, _, _,
Field Observations:					
Surface Water Present?		Depth (inches):	5		
Water Table Present?	Yes NoX	Depth (inches):			
Saturation Present?	Yes <u>No X</u>	Depth (inches):	Wetland Hyd	drology Present? Yes	<u>X</u> No
(includes capillary fringe)					
Describe Recorded Data (stream	aquae monitoring well aer	rial photos, previous ir	nspection) if available:		
Describe Necolded Data (stream	gauge, monitoring well, aer	la pilotos, previous il	ispection), il available.		
Remarks:					

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

VEGETATION (Four Strata) - Use scientific names	Sampling Point: WDP-9			
				Dominance Test worksheet:
	Absolute	Dominant	Indicator	Number of Dominant Species
Tree Stratum (Plot size: r=30')	% Cover	Species?	Status	That Are OBL, FACW, or FAC: 2 (A)
1. <i>Quercus palustris /</i> Pin oak	20	Yes	FACW	
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				
5				Percent of Dominant Species
6				•
7				That Are OBL, FACW, or FAC: 100.0 (A/B)
8.				Prevalence Index worksheet:
	20	= Total Cove	r	Total % Cover of: Multiply by:
50% of total cover: 10	20% (of total cover:	4	$\frac{1}{\text{OBL species}} \qquad \frac{1}{145} \qquad \frac{1}{\text{x 1}} = 145$
Sapling/Shrub Stratum (Plot size: r=20')				FACW species $35 \times 2 = 70$
1/				FAC species 33 $x_2 = 70$ FAC species 0 $x_3 = 0$
2.				· · · · · · · · · · · · · · · · · · ·
				FACU species $0 \times 4 = 0$
A				UPL species $0 \times 5 = 0$
5				Column Totals: <u>180</u> (A) <u>215</u> (B)
0				
				Prevalence Index = B/A = 1.19
0	·			Hydrophytic Vegetation Indicators:
0	0	= Total Cove		X 1 - Rapid Test for Hydrophytic Vegetation
50% of total cover: 0		Total Cove of total cover:		$\frac{1}{2}$ - Napid Test for Hydrophydre Vegetation X 2 - Dominance Test is >50%
	20760			X 3 - Prevalence Index $\leq 3.0^{1}$
Herb Stratum (Plot size:)	100	Vaa		
1. Polygonum hydropiperoides / Mild water pepper	100	Yes	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Ludwigia peploides / Marsh purslane</u>	25	<u>No</u>	OBL	
3. Lemna minor / Smaller duckweed	20	<u>No</u>	OBL	¹ Indicators of hydric soil and wetland hydrology must
4. Juncus anthelatus / Poverty rush, Kentucky or poverty rush	15	No	FACW	be present, unless disturbed or problematic.
5	·			Definitions of Four Vegetation Strata:
6				bennitons of Four Vegetation official
7				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
8				more in diameter at breast height (DBH), regardless of
9				
10				height.
11				Openting (Obench - M/s a data banda - saskadia na ing a data -
12				Sapling/Shrub – Woody plants, excluding vines, less
	160	= Total Cove	r	than 3 in. DBH and greater than 3.28 ft (1 m) tall.
50% of total cover: 80	20% (of total cover:	32	
Woody Vine Stratum (Plot size:r=20')				Herb – All herbaceous (non-woody) plants, regardless
1				of size, and woody plants less than 3.28 ft tall.
2.				
3.				Woody vine – All woody vines greater than 3.28 ft in
4.				height.
5.				
	0	= Total Cove	r	Hydrophytic
50% of total cover: 0	20% (of total cover:		Vegetation
				Present? Yes X No

S	O	II.	

Depth	Matrix			Features						
(inches)	Color (moist)	%	Color (moist)	% Тур	e ¹	Loc ²	Texture	Remarks		
0-16	7.5YR 5/1	85	10YR 6/8	15 C		Μ	silty clay			
Type: C=Con	ncentration, D=Depletio	n, RM=Redu	ced Matrix, MS=Mask	ed Sand Grains.			² Location: F	PL=Pore Lining, M=Matrix.		
Hydric Soil Ir	ndicators: (Applicable	to all LRRs		•			Indicators for P	roblematic Hydric Soils ³ :		
Histosol	(A1)			elow Surface (S8)			1 cm Muck	(A9) (LRR O)		
Histic Ep	pipedon (A2)		Thin Dark S	urface (S9) (LRF	S, T, U	I)	2 cm Muck	(A10) (LRR S)		
Black His	stic (A3)		Loamy Muc	ky Mineral (F1) (L	RR O)		Reduced Vertic (F18) (outside MLRA 150A,B)			
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)						Piedmont Floodplain Soils (F19) (LRR P, S, T)				
Stratified	l Layers (A5)		X Depleted M	atrix (F3)			Anomalous Bright Loamy Soils (F20)			
Organic	Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6)					(MLRA 153B)				
5 cm Mu	cky Mineral (A7) (LRR	t P, T, U)	Depleted Da	ark Surface (F7)			Red Parent Material (TF2)			
Muck Pre	esence (A8) (LRR U)		Redox Depr	ressions (F8)			Very Shallow Dark Surface (TF12)			
1 cm Mu	ck (A9) (LRR P, T)		Marl (F10)	(LRR U)			Other (Explain in Remarks)			
Depleted	Below Dark Surface (A11)		chric (F11) (MLRA	151)					
Thick Da	irk Surface (A12)		Iron-Manga	nese Masses (F12)(LRR	O, P, T)	³ Indicators of	hydropphobic vegetation and		
Coast Pr	airie Redox (A16) (ML	RA 150A)	Umbric Sur	face (F13) (LRR I	, P. T. U)		wetland h	ydrology must be present.		
	lucky Mineral (S1) (LR			c (F17) (MLRA 1				sturbed or problematic.		
	leyed Matrix (S4)	-,-,		ertic (F18) (MLRA		150B)				
	edox (S5)			loodplain Soils (F1)			
	Matrix (S6)				<i>,</i> .		, 149A, 153C, 153D)			
	face (S7) (LRR P, S,	T, U)			5)		,,			
Restrictive L	ayer (if present):									
Type:										
Depth (ind	ches):						Hydric Soil Presen	t? Yes X No		
Remarks:										

Project/Site:	REDI Arkansas	Cit	y/County: Homan	Township, Texarka	ana, Miller Count	Sampling D	ate: 03/03/2021
Applicant/Owner:		X REDI				Sampling P	
Investigator(s):	Roger Willis	Se	ction, Township, R	ange:			
Landform (hillslope, terrace, etc):	berm	Lo	cal relief (concave,	convex, none):	convex		Slope (%): 2
Subregion (LRR or MLRA):	LRR P	Lat:	33.54871		-93.863373		Datum: WGS 1984
Soil Map Unit Name:	Billyhaw clay, 0 to 1	percent slopes,	, rarely flooded		NWI classificatio	n:	Non-wetland
Are climatic / hydrologic conditions o	n the site typical for this tim	e of year? Yes	s <u>N</u> o	X (If no, e	explain in Remarks	s.)	
Are Vegetation, Soil	, or Hydrology	significantly dis	sturbed?	Are "Normal Circo	umstances" preser	nt? Yes	s X No
Are Vegetation, Soil	, or Hydrology	naturally proble	ematic?	(If needed, explai	in any answers in I	Remarks.)	
SUMMARY OF FINDINGS -	Attach site map show	wing sampli	ng point locat	ions, transect	s, important f	eatures,	etc.
Hydrophytic Vegetation Present?	Yes	No X					
Hydric Soil Present?	Yes		Is the San	npled Area			
Wetland Hydrology Present?	Yes		within a W		Yes	No	X
Remarks: High precipitation in r	preceding weeks						
HYDROLOGY							
Wetland Hydrology Indicators:							
Primary Indicators (minimum of or	he required: check all that a	nnlv)			Secondary Indica	tors (minimu	ım of two required)
Surface Water (A1)		quatic Fauna (B	(13)		Surface Soil		
High Water Table (A2)		arl Deposits (B1	,			· · /	cave Surface (B8)
Saturation (A3)		ydrogen Sulfide			Drainage Pa	-	. ,
Water Marks (B1)			heres along Living	Roots (C3)	Moss Trim Li		
Sediment Deposits (B2)		י resence of Redu		()	Dry-Season	· · ·	(C2)
Drift Deposits (B3)			uction in Tilled Soils	; (C6)	Crayfish Bur		
Algal Mat or Crust (B4)		hin Muck Surfac		()		· ,	rial Imagery (C9)
Iron Deposits (B5)		ther (Explain in	. ,		Geomorphic		
Inundation Visible on Aerial Ir			,		Shallow Aqu		-)
Water-Stained Leaves (B9)					FAC-Neutral	, ,	
					Sphagnum n		-RR T. U)
				<u>т </u>		(-) (
Field Observations:							
Surface Water Present?		Depth (inches):					
Water Table Present?		Depth (inches):					
Saturation Present?	Yes <u>No X</u> [Depth (inches):		Wetland Hydro	ology Present?	Yes	No X
(includes capillary fringe)							
Describe Recorded Data (stream g	gauge, monitoring well, aeri	al photos, previ	ous inspection), if a	available:			
Remarks:							

VEGETATION (Four Strata) Use scientific nar finlant

/EGETATION (Four Strata) - Use scientific name	s of plant	s.			Sam	pling Point:		UDP-9
<u>Tree Stratum</u> (Plot size: <u>r=30'</u>) 1.	Absolute % Cover	Dominant Species?	Indicator Status	Number of Domina	nt Species		0	(A)
23							2	(B)
5					•		0.0	_ (A/B)
8.								
		-			r of:	Mu	Iltiply by:	
	20% 0	of total cover:	0	OBL species	0	x 1 =	0	
				FACW species	0	x 2 =	0	
1				FAC species	0	x 3 =	0	
2				FACU species	80	x 4 =	320	
3			<u> </u>	UPL species	45	x 5 =	225	
4				· · · -				(B)
5							0.0	(2)
6				Prevalence li	ndex = B/A =	: <u> </u>	4.36	
7			<u> </u>					
8								
	0	= Total Cov	er	1 - Rapid Test	for Hydrophy	ytic Veget	ation	
50% of total cover: 0	20% (of total cover:	0	2 - Dominance	• Test is >50°	%		
Herb Stratum (Plot size: <u>1 square meter</u>)				3 - Prevalence	lndex ≤3.0¹			
1. Cynodon dactylon / Bermuda grass	80	Yes	FACU	Problematic H	ydrophytic V	egetation	' (Explain)	
2. Festuca versuta / Texas fescue	35	Yes	UPL			-		
3. Physalis heterophylla / Clammy groundcherry	10	No	UPL	¹ Indicators of hvdri	c soil and we	tland hvd	roloav mu	st
				-		-		
						p. 0		
				Definitions of Fou	r Vegetation	n Strata:		
					•			
				Tree – Woody plan	ts excluding	vines 3 i	in (76 cm) or
					-		•	,
9					i brodot noig	та (ввп),	rogaraioo	0.01
10				noight.				
11								
12.	Absolute Dominant Indicator (Plot size:			SS				
	125	= Total Cov	er	than 3 in. DBH and	greater than	n 3.28 ft (1	l m) tall.	
50% of total cover: 62	20% (of total cover:	25					
Woody Vine Stratum (Plot size: r=20')	Absolute Dominant Indicator	ess						
1.				of size, and woody	plants less t	han 3.28	ft tall.	
<u> </u>								
3.				Woody vine – All v	woody vines	greater th	an 3.28 ft	in
				•	,	0		
4								
5		- <u></u>		Hydrophytic				
	0	= Total Cov	er					
50% of total cover: 0	20% (of total cover:	0	-	Yes	No	×	
Remarks (if observed, list merphological adaptions below)								

SOIL

Depth	ription: (Describe to t Matrix			x Features		,		
(inches)	Color (moist)	%	Color (moist)	% Туре	¹ Loc ²	Texture	Remarks	
0-18	10YR 4/4	100				clay loam		
						* * * * *		
¹ Type: C=Cor	ncentration, D=Depletic	on, RM=Reduce	d Matrix, MS=Mas	ked Sand Grains.		² Location: PL	=Pore Lining, M=Matrix.	
Hydric Soil I	ndicators: (Applicable	e to all LRRs, u	Inless otherwise I	noted.)		Indicators for Pro	oblematic Hydric Soils ³ :	
Histosol	(A1)		Polyvalue	Below Surface (S8)	(LRR S, T, U)	1 cm Muck (A	A9) (LRR O)	
Histic Ep	pipedon (A2)		Thin Dark	Surface (S9) (LRR	S, T, U)	2 cm Muck (A	A10) (LRR S)	
Black Hi	istic (A3)		Loamy Mu	cky Mineral (F1) (LF	RR 0)	Reduced Ver	tic (F18) (outside MLRA 150)A,B)
Hydroge	en Sulfide (A4)		Loamy Gle	eyed Matrix (F2)		Piedmont Flo	odplain Soils (F19) (LRR P, S	3, T)
Stratified	d Layers (A5)		Depleted N	/latrix (F3)		Anomalous B	Bright Loamy Soils (F20)	
Organic	Bodies (A6) (LRR P, T	; U)	Redox Dar	k Surface (F6)		(MLRA 153B	i)	
5 cm Mu	ucky Mineral (A7) (LRF	r p, t, u)	Depleted D	Dark Surface (F7)		Red Parent M	/laterial (TF2)	
Muck Pr	resence (A8) (LRR U)		Redox Dep	pressions (F8)		Very Shallow	Dark Surface (TF12)	
1 cm Mu	uck (A9) (LRR P, T)		Marl (F10)	(LRR U)		Other (Explai	in in Remarks)	
Depleted	d Below Dark Surface (A11)	Depleted C	Ochric (F11) (MLRA	151)			
Thick Da	ark Surface (A12)		Iron-Manga	anese Masses (F12)	(LRR O, P, T)	³ Indicators of h	ydropphobic vegetation and	
Coast P	rairie Redox (A16) (MI	LRA 150A)	Umbric Su	rface (F13) (LRR P,	T, U)	wetland hyd	drology must be present.	
Sandy M	/lucky Mineral (S1) (LF	RR O, S)	Delta Ochr	ic (F17) (MLRA 151)	unless distu	urbed or problematic.	
Sandy G	Gleyed Matrix (S4)		Reduced V	/ertic (F18) (MLRA	150A, 150B)			
Sandy F	Redox (S5)		Piedmont I	Floodplain Soils (F19) (MLRA 1494	N)		
Stripped	l Matrix (S6)		Anomalous	s Bright Loamy Soils	(F20) (MLRA	149A, 153C, 153D)		
Dark Su	rface (S7) (LRR P, S,	T, U)						
Restrictive L	_ayer (if present):							
Туре:								
Depth (in	iches):					Hydric Soil Present?	Yes No	Х
Remarks:								
Project/Site:	REDI Arkansas	City/C	ounty: Homan Township, Te	exarkana, Miller Count	Sampling Date:	03/04/2021		
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Applicant/Owner:		-TX REDI		State: Arkansas		WDP-10		
Investigator(s):	Roger Willis	Sectio	n, Township, Range:					
Landform (hillslope, terrace, etc):	pond		relief (concave, convex, non	ie): concave	Slope	(%): 0		
Subregion (LRR or MLRA):			33.542276 Long:			n: WGS 1984		
Soil Map Unit Name:		ay, 0 to 1 percent slop	Des	NWI classification	n: Non-	wetland		
Are climatic / hydrologic conditions of	on the site typical for this t	ime of year? Yes	No X (If	f no, explain in Remarks	;.)			
Are Vegetation, Soil	, or Hydrology	significantly disturl	Ded? Are "Normal	l Circumstances" presen	nt? Yes X	(No		
	, or Hydrology			explain any answers in F	Remarks.)			
SUMMARY OF FINDINGS -				sects, important fe	eatures, etc.			
Hydrophytic Vegetation Present?	Yes X	No						
Hydric Soil Present?	Yes X	No	Is the Sampled Area					
Wetland Hydrology Present?	Yes X		within a Wetland?	Yes X	No			
Remarks:	nno og dinge sug olko							
High precipitation in	precealing weeks							
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of or	ne required: check all that	apply)		Secondary Indicate	tors (minimum of tv	wo required)		
X Surface Water (A1)	· · ·	Aquatic Fauna (B13)		Surface Soil (Cracks (B6)	,		
High Water Table (A2)		Marl Deposits (B15)	(LRR U)	X Sparsely Veg	getated Concave S	ourface (B8)		
Saturation (A3)		Hydrogen Sulfide Od	or (C1)	Drainage Pat	iterns (B10)			
Water Marks (B1)		Oxidized Rhizospher	es along Living Roots (C3)	Moss Trim Lir	nes (B16)			
Sediment Deposits (B2)		Presence of Reduced	d Iron (C4)	Dry-Season V	Water Table (C2)			
Drift Deposits (B3)		Recent Iron Reductio	n in Tilled Soils (C6)	Crayfish Burr	rows (C8)			
Algal Mat or Crust (B4)		Thin Muck Surface (C	27)	Saturation Vis	sible on Aerial Ima	agery (C9)		
Iron Deposits (B5)		Other (Explain in Rer	narks)	Geomorphic I				
X Inundation Visible on Aerial I	magery (B7)			Shallow Aquit	tard (D3)			
Water-Stained Leaves (B9)	/			FAC-Neutral	Test (D5)			
				Sphagnum m	noss (D8) (LRR T ,	U)		
Field Observations:								
Field Observations: Surface Water Present?	Vee V Ne	Dopth (inchas);	4					
Water Table Present?	Yes X No Yes No X	Depth (inches): Depth (inches):	4					
Saturation Present?	Yes No X	Depth (inches):	Wotland	Hydrology Present?	Yes X	No		
(includes capillary fringe)				Hydrology Present?		NO		
Describe Recorded Data (stream	gauge, monitoring well, a	erial photos, previous	inspection), if available:					
Remarks:								

VEGETATION (Four Strata) - Use scientific names of plants

VEGETATION (Four Strata) - Use scientific names	s of plant	s.		Sam	pling Point	t: WD	P-10
				Dominance Test worksheet:			
	Absolute	Dominant	Indicator	Number of Dominant Species			
Tree Stratum (Plot size: r=30')	% Cover	Species?	Status	That Are OBL, FACW, or FAC:		2	(A)
1. Celtis occidentalis / Common hackberry	25	Yes	FACU	······································			()
2. Gleditsia triacanthos / Honeylocust, Honey locust	15	Yes	FAC	Total Number of Dominant			
3				Species Across All Strata:		3	(B)
4						0	_ (D)
5		<u> </u>		Percent of Dominant Species			
6				That Are OBL, FACW, or FAC:		66 7	
7				That Are OBL, FACW, of FAC.		66.7	(A/B)
8				Prevalence Index worksheet:			
	40	= Total Cove	er	Total % Cover of:		Itiply by:	
50% of total cover: 20	20% (of total cover:	8	OBL species 0	x 1 =	0	_
Sapling/Shrub Stratum (Plot size: r=20')				FACW species 0	x 2 =		
1				FAC species 27	x 3 =	81	_
2.				FACU species 25			
3					_ x 4 =	100	
				UPL species 0	_ x 5 =	0	(D)
F				Column Totals: 52	(A)	181	(B)
0							
				Prevalence Index = B/A =	:	3.48	
		·	<u> </u>	Hydrophytic Vegetation Indic	atore		
8	0	= Total Cove				otion	
FOW of total any any		-		1 - Rapid Test for Hydroph		alion	
	20% (of total cover:	0	X 2 - Dominance Test is >50			
<u>Herb Stratum</u> (Plot size: <u>1 square meter</u>)	40			3 - Prevalence Index ≤3.01		<i></i>	
1. Ranunculus fascicularis / Early buttercup		Yes		Problematic Hydrophytic V	egetation	(Explain)	
2							
3				¹ Indicators of hydric soil and we			t
4				be present, unless disturbed or	problema	tic.	
5					.		
6				Definitions of Four Vegetation	n Strata:		
7							
8				Tree – Woody plants, excluding			
9				more in diameter at breast heig	ht (DBH),	regardless	of
10				height.			
11							
12.		- <u></u>		Sapling/Shrub – Woody plants	s, excludin	g vines, les	s
	12	= Total Cove	er	than 3 in. DBH and greater that	า 3.28 ft (1	m) tall.	
50% of total cover: 6	20%	of total cover:	2				
Woody Vine Stratum (Plot size: r=20')				Herb – All herbaceous (non-wo	ody) plant	s, regardle	SS
1,				of size, and woody plants less t	han 3.28 f	t tall.	
<u></u>	·						
3.				Woody vine - All woody vines	greater th	an 3.28 ft i	า
4.				height.	-		
5		- Total Carrie		Hydrophytic			
F00/ -f1-t-1 0	0	= Total Cove		Vegetation			
50% of total cover: 0	20% (of total cover:	0	Present? Yes	X No		

S	O	11	

0-16	ation, D=Depletion,	<u>60</u> 	Color (moist) 7.5YR 4/6	<u>40</u> 	<u>Type</u> 1 <u>C</u>	<u>Loc²</u> <u>M</u>	Texture	Remarks
dric Soil Indicat Histosol (A1)		RM=Reduce						
dric Soil Indicat Histosol (A1)		RM=Reduce		<u> </u>				
Histosol (A1)					ins.			L=Pore Lining, M=Matrix.
,	tors. (Applicable to	all LKKS,		Below Surface	(S8) (LF	R S. T. U)		A9) (LRR O)
Black Histic (A Hydrogen Sulfi Stratified Layer Organic Bodies 5 cm Mucky M Muck Presence 1 cm Muck (A9 Depleted Below Thick Dark Sur Coast Prairie F	3) ide (A4) rs (A5) s (A6) (LRR P, T, U ineral (A7) (LRR P, e (A8) (LRR U) 9) (LRR P, T) w Dark Surface (A1 fface (A12) Redox (A16) (MLR Mineral (S1) (LRR Matrix (S4) (S5)	T, U) 1) A 150A)	Thin Dark S Loamy Muc Loamy Gle X Depleted M Redox Darl Depleted D Redox Dep Marl (F10) Depleted C Iron-Manga Umbric Sur Delta Ochri Reduced V Piedmont F	Surface (S9) (cky Mineral (F ² yed Matrix (F2 latrix (F3) k Surface (F6) ark Surface (F6) ark Surface (F6) (LRR U) uchric (F11) (N anese Masses face (F13) (L ic (F17) (MLR ertic (F18) (N Floodplain Soil:	(LRR S, T 1) (LRR (2) =7) =7) =7) = (F12) (LF = (F12) (LF = (F12) (LF = (LF = (LF = (LF)) = (LF) = (LF) = (LF) = (LF) = (LF) = (LRR (2) = (LR (2) = (L	; U) O) R O, P, T) J) A, 150B) MLRA 149A	2 cm Muck (Reduced Ve Piedmont Fla Anomalous F (MLRA 153E Red Parent I Very Shallow Other (Expla ³ Indicators of I wetland hy unless dist	A10) (LRR S) rtic (F18) (outside MLRA 150A,I oodplain Soils (F19) (LRR P, S, T Bright Loamy Soils (F20)
Dark Surface ((S7) (LRR P, S, T, I	ר)						
estrictive Layer (Type:	if present):							
Depth (inches):							Hydric Soil Present	? Yes <u>X</u> No

Project/Site:	REDI Arkansas	City/County: Homan Tow	nship, Texarkana, Miller Count	Sampling Date: 03/04/2021
	AR-TX REDI		State: Arkansas	Sampling Point: UDP-10
Investigator(s):	Roger Willis	Section, Township, Range	<u></u>	
Landform (hillslope, terrace, etc):		Local relief (concave, con		Slope (%): 0
Subregion (LRR or MLRA):				
Soil Map Unit Name:		cent slopes	NWI classificatio	on: Non-wetland
	n the site typical for this time of year?	Yes No 2	X (If no, explain in Remarks	s.)
	, or Hydrologysignifican		"Normal Circumstances" prese	nt? Yes X No
	, or Hydrology naturally p		needed, explain any answers in	Remarks.)
	Attach site map showing sar		s, transects, important f	features, etc.
Hydrophytic Vegetation Present?	Yes No X			
Hydric Soil Present?	Yes X No		d Area	
Wetland Hydrology Present?	Yes No X			No X
		_		
Remarks:				
High precipitation in	preceding weeks			
HYDROLOGY				
Wetland Hydrology Indicators:				
Primary Indicators (minimum of or	ne required: check all that apply)		Secondary Indica	tors (minimum of two required)
Surface Water (A1)	Aquatic Faul	na (B13)	Surface Soil	· · · · · ·
High Water Table (A2)		is (B15) (LRR U)		getated Concave Surface (B8)
Saturation (A3)		ulfide Odor (C1)	Drainage Pa	- , ,
Water Marks (B1)		izospheres along Living Roc		
Sediment Deposits (B2)		Reduced Iron (C4)		Water Table (C2)
Drift Deposits (B3)		Reduction in Tilled Soils (C6		· ,
Algal Mat or Crust (B4)	Thin Muck S			isible on Aerial Imagery (C9)
Iron Deposits (B5)		in in Remarks)		Position (D2)
Inundation Visible on Aerial II		in in iteration	Shallow Aqu	
Water-Stained Leaves (B9)			FAC-Neutral	. ,
				moss (D8) (LRR T, U)
Field Observations:				
Surface Water Present?	Yes <u>No X</u> Depth (inch	nes):		
Water Table Present?	Yes NoX Depth (incl	·		
Saturation Present?	Yes <u>No X</u> Depth (incl	nes): V	Vetland Hydrology Present?	Yes NoX
(includes capillary fringe)				
Describe Recorded Data (stream (gauge, monitoring well, aerial photos,	previous inspection) if avail	able:	
Describe Recorded Data (stream)	yauge, monitoring weil, aenai photos,	previous inspection), il avail	able.	
Remarks:				
1				

VEGETATION (Four Strata) - Use scientific names

Tree Stratum (Plot size: r=30')

of plant	s.		Samplir	UDP-10		
Absolute % Cover	Dominant Species?	Indicator Status	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			

1. (FIOUSIZE:)	70 COver	opecies:	Status	That Are OBL, FACW, or FAC:		0	(A)
			<u> </u>				
3				Total Number of Dominant			
				Species Across All Strata:		1	(B)
			<u> </u>				
				Percent of Dominant Species			
				That Are OBL, FACW, or FAC:		0.0	(A/B)
7			<u> </u>				_
8		Tatal Qauna		Prevalence Index worksheet:			
		= Total Cover		Total % Cover of:	Mul	tiply by:	
50% of total cover: 0	20% 0	f total cover:	0	OBL species 0	x 1 =	0	
Sapling/Shrub Stratum (Plot size: r=20')				FACW species 0	x 2 =	0	
1				FAC species 35	x 3 =	105	
2				FACU species 100	x 4 =	400	
3				UPL species 25	x 5 =	125	
4				Column Totals: 160	(A)	630	(B)
5					,		. ,
6				Prevalence Index = B/A =	:	3.94	
7							
8				Hydrophytic Vegetation Indic	ators:		
	0	= Total Cover		1 - Rapid Test for Hydroph	ytic Vegeta	ation	
50% of total cover: 0	20% o	f total cover:	0	2 - Dominance Test is >50	%		
Herb Stratum (Plot size: 1 square meter)		-		3 - Prevalence Index ≤3.0 ¹			
1. Cynodon dactylon / Bermuda grass	100	Yes	FACU	Problematic Hydrophytic V	'egetation ¹	(Explain)	
2. Ranunculus fascicularis / Early buttercup	25	No	FAC		0	· · · /	
3. Medicago minima / Small bur clover, Burclover	15	No	UPL	¹ Indicators of hydric soil and we	tland hvdr	oloav mus	t
4. Rumex crispus / Curly dock	10	No	FAC	be present, unless disturbed or	-	•••	-
5. Festuca versuta / Texas fescue	10	No	UPL				
		110		Definitions of Four Vegetation	n Strata:		
6 7.			<u> </u>				
0				Tree – Woody plants, excluding	ı vines, 3 ir	n. (7.6 cm)	or
8 9.				more in diameter at breast heig			
10				height.	()/	5	
10							
11			<u> </u>	Sapling/Shrub – Woody plants	excluding	ı vines les	35
12				than 3 in. DBH and greater than	-	-	
		= Total Cover			10.20 11 (1	ini) tan.	
50% of total cover: 80	20% o	f total cover:	32	Herb – All herbaceous (non-wo	odv) plante	rogardia	
Woody Vine Stratum (Plot size: r=20')				,	• / •		35
1				of size, and woody plants less t	nan 5.20 it	lan.	
2						0.00.6	
3				Woody vine – All woody vines	greater tha	an 3.28 π i	n
4				height.			
5				Hydrophytic			
	0	= Total Cover					
50% of total cover: 0	20% o	f total cover:	0	Vegetation	N 1	v	
		-		Present? Yes	No	<u> </u>	

Depth		0/	0 1 () ()	Features	T 1	1 2	- ·			
(inches)	Color (moist)	%	Color (moist)		Type ¹	Loc ²	Texture	Remarks		
0-3	7.5YR 3/1	90	7.5YR 6/8	10	<u> </u>	PL	sandy clay			
3-18	7.5YR 5/2	85	7.5YR 6/8	15	C	M,PL	sandy clay			
Type: C=Cor	ncentration, D=Depletio	n. RM=Redu	ced Matrix, MS=Masl	xed Sand Gr				PL=Pore Lining, M=Matrix.		
	ndicators: (Applicable							roblematic Hydric Soils ³ :		
Black Hi Hydroge Stratified Organic 5 cm Mu Muck Pr 1 cm Mu Depleted	(A1) bipedon (A2) stic (A3) en Sulfide (A4) d Layers (A5) Bodies (A6) (LRR P, T icky Mineral (A7) (LRF esence (A8) (LRR U) ick (A9) (LRR P, T) d Below Dark Surface (A ark Surface (A12)	r P, T, U)	Thin Dark S Loamy Muc Loamy Gle Depleted M X Redox Dar Depleted D Redox Dep Marl (F10) Depleted C	k Surface (Fi ark Surface pressions (F8	(LRR S, 1 F1) (LRR =2) 6) (F7) 3) (MLRA 151	r, u) O)	2 cm Muck Reduced Vé Piedmont F Anomalous (MLRA 153 Red Parent Very Shallo Other (Expl	 (A9) (LRR O) (A10) (LRR S) ertic (F18) (outside MLRA 150A,B) loodplain Soils (F19) (LRR P, S, T) Bright Loamy Soils (F20) B) Material (TF2) w Dark Surface (TF12) ain in Remarks) hydropphobic vegetation and 		
Inick 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)			Delta Ochri Reduced V Piedmont F	face (F13) ic (F17) (ML ertic (F18) Floodplain So Bright Loan	.RA 151) (MLRA 150 pils (F19) (I)A, 150B) MLRA 1494	wetland hydrology must be present. unless disturbed or problematic.			
	rface (S7) (LRR P, S,	T, U)								
Туре:	.ayer (if present):						Undria Cail Drasse			
Depth (in	cnes):						Hydric Soil Presen	t? Yes X No		
Remarks:										

Project/Site:	REDI Arkansas	City/C	County: Homan Towi	nship, Texark	ana, Miller Count	Sampling Date:	03/04/2021
Applicant/Owner:	AR	TX REDI	-	Sta	te: Arkansas	Sampling Point	: T8DP1/WDP-11
Investigator(s):	Roger Willis	Section	on, Township, Range				
Landform (hillslope, terrace, etc):		Local	relief (concave, con	ivex, none):	none	Slo	pe (%): 0
Subregion (LRR or MLRA):			33.547225				um: WGS 1984
Soil Map Unit Name:		ay, 0 to 1 percent slo	pes		NWI classification	n: No	on-wetland
Are climatic / hydrologic conditions	on the site typical for this t	ime of year? Yes	No	X (If no, e	explain in Remarks	3.)	
Are Vegetation, Soil	, or Hydrology	significantly distu	rbed? Are	"Normal Circ	umstances" preser	nt? Yes	X No
Are Vegetation, Soil	, or Hydrology	naturally problem	atic? (If n	needed, expla	in any answers in F	Remarks.)	
SUMMARY OF FINDINGS -	Attach site map sho	owing sampling	point location	s, transect	ts, important f	eatures, etc	
Hydrophytic Vegetation Present?	Yes X	No					
Hydric Soil Present?	Yes X	No	Is the Sample	d Area			
Wetland Hydrology Present?	Yes X	No	within a Wetla		Yes X	No	
Remarks: High precipitation in	Preceding weeks						
HYDROLOGY							
Wetland Hydrology Indicators:							
Primary Indicators (minimum of c	one required: check all that	apply)			Secondary Indicat	tors (minimum c	of two required)
X Surface Water (A1)	X	Aquatic Fauna (B13)		Surface Soil	Cracks (B6)	
High Water Table (A2)		Marl Deposits (B15)	(LRR U)		Sparsely Veç	getated Concave	e Surface (B8)
Saturation (A3)		Hydrogen Sulfide Oo	dor (C1)		Drainage Pat	tterns (B10)	
Water Marks (B1)			res along Living Roo	ots (C3)	X Moss Trim Li		
Sediment Deposits (B2)		Presence of Reduce	()			Water Table (C2	<u>'</u>)
Drift Deposits (B3)			on in Tilled Soils (C6	3)	Crayfish Burr	. ,	()
Algal Mat or Crust (B4)		Thin Muck Surface (,			isible on Aerial I	magery (C9)
Iron Deposits (B5)		Other (Explain in Re	marks)			Position (D2)	
Inundation Visible on Aerial	Imagery (B7)				Shallow Aqui		
Water-Stained Leaves (B9)					X FAC-Neutral Sphagnum m	noss (D8) (LRR	. T, U)
Field Observations:	Vee V Ne	Denth (inches);	4				
Surface Water Present? Water Table Present?	Yes <u>X</u> No Yes No X	Depth (inches): Depth (inches):	4				
Saturation Present?	Yes No X	Depth (inches):	w	Notland Hydr	ology Present?	Yes X	No
(includes capillary fringe)				venana riyar	ology i resent:		
(includes supilary initige)							
Describe Recorded Data (stream	gauge, monitoring well, a	erial photos, previous	s inspection), if availa	able:			
Remarks:							

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

Sampling Point: T8DP1/WDP-11

Tree Stratum (Plot size:r=30') 1. <i>Nyssa sylvatica /</i> Blackgum	Absolute <u>% Cover</u> 30	Dominant Species? Yes	Indicator Status FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:	5	(A)
 Carpinus caroliniana / American hornbeam 	15	Yes	FAC	Total Number of Dominant Species Across All Strata:	5	(B)
5 6 7		 		Percent of Dominant Species That Are OBL, FACW, or FAC:	100.0	(A/B)
8	45	= Total Cove		Prevalence Index worksheet:		
50% of total cover: 22	-	of total cover:		Total % Cover of:	Multiply by:	
	20%	or total cover.	9	OBL species 15	x 1 =15	
Sapling/Shrub Stratum (Plot size: r=20')				FACW species 50	x 2 = 100	
1. Carpinus caroliniana / American hornbeam	45	Yes	FAC	FAC species 140	x 3 = 420	
2				FACU species 0	x 4 = 0	
3				UPL species 0	x 5 = 0	
4				· · ·	(A) 535	(B)
5 6				Prevalence Index = B/A =		(5)
7						
8				Hydrophytic Vegetation Indicat	ors:	
	45	= Total Cove	r	1 - Rapid Test for Hydrophyti	ic Vegetation	
50% of total cover: 22	20%	of total cover:	9	X 2 - Dominance Test is >50%		
Herb Stratum (Plot size: 1 square meter)				X 3 - Prevalence Index $\leq 3.0^{1}$		
````	50	Vee			natation1 (Evalui	
1. Juncus anthelatus / Poverty rush, Kentucky or poverty rush	50	Yes	FACW	Problematic Hydrophytic Veg	Jetation (Explain	1)
2. Cyperus esculentus / Nut grass	40	Yes	FAC			
3. Typha domingensis / Cattail, Southern cattail	15	No	OBL	¹ Indicators of hydric soil and wetla	and hydrology m	ust
4. <i>Rumex crispus /</i> Curly dock	10	No	FAC	be present, unless disturbed or pr	roblematic.	
5						
6				Definitions of Four Vegetation S	Strata:	
7						
8				Tree – Woody plants, excluding v		
9				more in diameter at breast height	(DBH), regardle	ss of
10				height.		
11.						
12.				Sapling/Shrub - Woody plants, e	excluding vines,	less
·	115	= Total Cove		than 3 in. DBH and greater than 3	3.28 ft (1 m) tall.	
	-	-		Ű		
50% of total cover: 57	20%	of total cover:	23	Herb – All herbaceous (non-wood	du) planta rogar	
Woody Vine Stratum (Plot size: r=20') 1.				of size, and woody plants less that	• • • •	liess
2						
3.			_	Woody vine – All woody vines gr	eater than 3.28	t in
4.				height.		
5.						
	0	= Total Cove	r	Hydrophytic		
		-		Vegetation		
50% of total cover: 0	20%	of total cover:	0	Present? Yes X	No	

(inches)         Color (moist)         %         Color (moist)         %         Type1         Loc2         Texture         Remarks           0-3         10YR 3/2         85         10YR 6/8         15         C         M         clay         dlay           3-18         7.5YR 4/4         80         10YR 6/6         20         C         M         clay loam	Depth	Matrix		Redox	Features					
3-18       7.5YR 4/4       80       10YR 6/6       20       C       M       clay loam         3-18       7.5YR 4/4       80       10YR 6/6       20       C       M       clay loam         3-18       7.5YR 4/4       80       10YR 6/6       20       C       M       clay loam         3-18       7.5YR 4/4       80       10YR 6/6       20       C       M       clay loam         3-18       7.5YR 4/4       80       10YR 6/6       20       C       M       clay loam         3-18       7.5YR 4/4       80       10YR 6/6       20       C       M       clay loam         3-18       7.5YR 4/4       80       10YR 6/6       20       C       M       clay loam         3-10       1       Max 10       1       m       Max 10       1 </th <th>(inches)</th> <th>Color (moist)</th> <th>%</th> <th>Color (moist)</th> <th>%</th> <th>Type¹</th> <th>Loc²</th> <th>Texture</th> <th>Remarks</th> <th></th>	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ^a Location: PL=Pore Lining, M=Matrix         Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils         Histosol (A1)       Polyvalue Below Surface (S8) (LRR S, T, U)       1 cm Muck (A9) (LRR O)         Histis (A3)       Loamy Mucky Mineral (F1) (LRR O)       Reduced Vertic (F18) (outside MLR         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)       Reduced Vertic (F18) (outside MLR         Stratified Layers (A5)       Depleted Matrix (F2)       Piedmont Floodplain Soils (F19) (LR         Granic Bodies (A6) (LRR P, T, U)       X Redox Dark Surface (F6)       (MLRA 153B)         S or Mucky Mineral (A7) (LRR P, T, U)       Depleted Dark Surface (F7)       Red Parent Material (TF2)         Muck (A9) (LRR P, T, U)       Redox Depressions (F8)       Very Shallow Dark Surface (TF12)         1 cm Muck (A9) (LRR P, T)       Mart (F10) (LRR U)       Other (Explain in Remarks)         Depleted Bolow Dark Surface (A12)       Iron-Manganese Masses (F12) (LRR O, P, T) ^a Indicators of hydropphobic vegetation         Sandy Mucky Mineral (S1) (LRR O, S)       Delta Ochric (F17) (MLRA 151)       anomalous Bright Loamy Soils (F20)         Sandy Gleyed Matrix (S6)       Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)       Dark Surface (S7) (LRR P, S, T, U)         Sandy Medx (	0-3	10YR 3/2	85	10YR 6/8	15	С	М	clay		
Aydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils         Histosol (A1)       Polyvalue Below Surface (S8) (LRR S, T, U)       1 cm Muck (A9) (LRR O)         Histosol (A2)       Thin Dark Surface (S9) (LRR S, T, U)       2 cm Muck (A0) (LRR O)         Black Histic (A3)       Loamy Mucky Mineral (F1) (LRR O)       Reduced Vertic (F18) (outside MLR         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Piedmont Floodplain Soils (F19) (LR         Stratified Layers (A5)       Depleted Matrix (F3)       Anomalous Bright Loamy Soils (F20)         Organic Bodies (A6) (LRR P, T, U)       X Redox Dark Surface (F6)       (MLRA 153B)         5 cm Mucky Mineral (A7) (LRR P, T, U)       Redox Depressions (F8)       Very Shallow Dark Surface (TF12)         1 cm Muck (A9) (LRR P, T)       Marl (F10) (LRR U)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Ochric (F11) (MLRA 151)       Other (Explain in Remarks)         Depleted Selow Dark Surface (A12)       Inon-Manganese Masses (F12) (LRR O, P, T)       Indicators of hydropphobic vegetation         Sandy Mucky Mineral (S1) (LRR O, S)       Delta Ochric (F17) (MLRA 150A, 150B)       Indicators of hydropphobic vegetation         Stripped Matrix (S6)       Anomalous Bright Loamy Soils (F20) (MLRA 149A)       Indicators of hydropphobic vegetation         Stripped Matrix (S6)	3-18	7.5YR 4/4	80	10YR 6/6	20	C	М	clay loam		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils         Histosol (A1)       Polyvalue Below Surface (S8) (LRR S, T, U)       1 cm Muck (A9) (LRR O)         Histosol (A2)       Thin Dark Surface (S9) (LRR S, T, U)       2 cm Muck (A9) (LRR O)         Black Histic (A3)       Loamy Mucky Mineral (F1) (LRR O)       Reduced Vertic (F18) (outside MLR         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Piedmont Floodplain Soils (F19) (LR         Stratified Layers (A5)       Depleted Matrix (F3)       Anomalous Bright Loamy Soils (F20)         Organic Bodies (A6) (LRR P, T, U)       X Redox Dark Surface (F6)       (MLRA 153B)         5 cm Mucky Mineral (A7) (LRR P, T, U)       Redox Depressions (F8)       Very Shallow Dark Surface (TF12)         1 cm Muck (A9) (LRR P, T)       Marl (F10) (LRR U)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Ochric (F11) (MLRA 151)       Other (Explain in Remarks)         Depleted Selw Dark Surface (A12)       Iron-Manganese Masses (F12) (LRR O, P, T)       andicators of hydropphobic vegetation         Sandy Mucky Mineral (S1) (LRR O, S)       Delta Ochric (F17) (MLRA 150A, 150B)       anomalous Bright Loamy Soils (F20) (MLRA 149A)         Stripped Matrix (S6)       Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)       Dark Surface (S7) (LRR P, S, T, U)         Res			·							
Histosol (A1)       Polyvalue Below Surface (S8) (LRR S, T, U)       1 cm Muck (A9) (LRR O)         Histic Epipedon (A2)       Thin Dark Surface (S9) (LRR S, T, U)       2 cm Muck (A10) (LRR S)         Black Histic (A3)       Loamy Mucky Mineral (F1) (LRR O)       Reduced Vertic (F18) (outside MLR         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Piedmont Floodplain Soils (F19) (LR         Stratified Layers (A5)       Depleted Matrix (F3)       Anomalous Bright Loamy Soils (F20)         Organic Bodies (A6) (LRR P, T, U)       X Redox Dark Surface (F6)       (MLRA 153B)         5 cm Mucky Mineral (A7) (LRR P, T, U)       Depleted Dark Surface (F7)       Red Parent Material (TF2)         Muck Presence (A8) (LRR P, T)       Marl (F10) (LRR U)       Redox Depressions (F8)       Very Shallow Dark Surface (TF12)         1 cm Muck (A9) (LRR P, T)       Marl (F10) (LRR U)       Other (Explain in Remarks)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Ochric (F11) (MLRA 151)       anidicators of hydropphobic vegetation         Coast Prairie Redox (A16) (MLRA 150A)       Umbric Surface (F13) (LRR P, T, U)       alindicators of hydropphobic vegetation         Sandy Mucky Mineral (S1) (LRR O, S)       Delta Ochric (F17) (MLRA 150A, 150B)       anomalous Bright Loamy Soils (F20) (MLRA 149A)         Sandy Redox (S5)       Piedmont Floodplain Soils (F19) (MLRA 149A)       Anomalous B	Type: C=Cor	ncentration, D=Depletion	n, RM=Reduc	ced Matrix, MS=Mask	ed Sand Gr	ains.		² Location:	PL=Pore Lining, M=N	/atrix.
	Histosol Histic Ep Black Hi Hydroge Stratifiec Organic 5 cm Mu Muck Pr 1 cm Mu Depleted Thick Da Coast Pr Sandy M Sandy G Sandy R Stripped	(A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) Bodies (A6) (LRR P, T, ucky Mineral (A7) (LRR resence (A8) (LRR U) uck (A9) (LRR P, T) d Below Dark Surface (A ark Surface (A12) rairie Redox (A16) (ML Aucky Mineral (S1) (LR Gleyed Matrix (S4) Redox (S5) H Matrix (S6)	U) P, T, U) A11) RA 150A) R O, S)	Polyvalue E Thin Dark S Loamy Muc Loamy Gle Depleted M X Redox Darl Redox Dep Marl (F10) Redox Cep Iron-Manga Umbric Sur Delta Ochri Reduced V Piedmont F	Below Surface (S9) ky Mineral ( yed Matrix (F3) & Surface (F ark Surface (F ark Surface (F1) chric (F11) nese Massa face (F13) c (F17) (MI ertic (F18) loodplain So	(LRR S, T (F1) (LRR ( F2) (6) (F7) 3) (MLRA 151 (LRR P, T, I LRA 151) (MLRA 150 (MLRA 150) (I	, U) O) RR O, P, T) J) MA, 150B) MLRA 149 <i>A</i>	<ul> <li>1 cm Muck</li> <li>2 cm Muck</li> <li>Reduced V</li> <li>Piedmont I</li> <li>Anomalous</li> <li>(MLRA 15</li> <li>Red Paren</li> <li>Very Shalk</li> <li>Other (Exp</li> <li>³Indicators of wetland h unless di</li> </ul>	(A9) (LRR O) (A10) (LRR S) (ertic (F18) (outside Floodplain Soils (F19 s Bright Loamy Soils 3B) t Material (TF2) ow Dark Surface (TF ilain in Remarks) f hydropphobic vege nydrology must be pro-	MLRA 150A,B ) (LRR P, S, T) (F20) 12) tation and esent.
	Туре:	• • • •								
Depth (inches):         Hydric Soil Present?         Yes         X         N	Depth (In	icnes):						Hydric Soll Presei	tr Yes X	No

Project/Site:	REDI Arkansas	City/County: Homan Township,	Texarkana, Miller Count Samplin	ng Date: 10/20/2021
Applicant/Owner:	AR-TX REDI		State: Arkansas Samplin	ng Point: T8DP1/WDP-11
Investigator(s):	Roger Willis	Section, Township, Range:		
Landform (hillslope, terrace, etc):	forest	Local relief (concave, convex, no	one): none	Slope (%): 0
Subregion (LRR or MLRA):			-93.856825	Datum: WGS 1984
Soil Map Unit Name:	Bossier clay, 0 to 1 per	cent slopes	NWI classification:	Non-wetland
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 Hydrologysignificant	ly disturbed? Are "Norm	al Circumstances" present?	Yes X No
	, or Hydrologynaturally p		, explain any answers in Remarks	3.)
	Attach site map showing sar		nsects, important feature	es, etc.
Hydrophytic Vegetation Present?	Yes X No			
Hydric Soil Present?	Yes X No	Is the Sampled Area		
Wetland Hydrology Present?	Yes No X			x X
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:				
Primary Indicators (minimum of o	one required: check all that apply)		Secondary Indicators (min	imum of two required)
Surface Water (A1)	Aquatic Faur		Surface Soil Cracks (	
High Water Table (A2)	Marl Deposit	s (B15) <b>(LRR U)</b>	Sparsely Vegetated 0	Concave Surface (B8)
Saturation (A3)		ılfide Odor (C1)	Drainage Patterns (B	10)
Water Marks (B1)		zospheres along Living Roots (C3)	· ·	
Sediment Deposits (B2)	<u> </u>	Reduced Iron (C4)	Dry-Season Water Ta	able (C2)
Drift Deposits (B3)	Recent Iron	Reduction in Tilled Soils (C6)	Crayfish Burrows (C8	3)
Algal Mat or Crust (B4)	Thin Muck S	urface (C7)	Saturation Visible on	Aerial Imagery (C9)
Iron Deposits (B5)	Other (Expla	in in Remarks)	Geomorphic Position	(D2)
Inundation Visible on Aerial	Imagery (B7)		Shallow Aquitard (D3	5)
Water-Stained Leaves (B9)			FAC-Neutral Test (D5	5)
			Sphagnum moss (D8	3) <b>(LRR T, U)</b>
Field Observations:				
Surface Water Present?	Yes No X Depth (inch	nes).		
Water Table Present?	Yes No X Depth (inch	·		
Saturation Present?	Yes No X Depth (inch		d Hydrology Present? Yes	No X
(includes capillary fringe)				
(moldes supilary milge)				
Describe Recorded Data (stream	gauge, monitoring well, aerial photos,	previous inspection), if available:		
Remarks:				

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

Sampling Point: T8DP1/WDP-11

				Dominance Test worksheet:		
	Absolute	Dominant	Indicator	Number of Dominant Species		
Tree Stratum (Plot size: r=30')	% Cover	Species?	Status	That Are OBL, FACW, or FAC:	5	(A)
1. Nyssa sylvatica / Blackgum	30	Yes	FAC			( )
2. Carpinus caroliniana / American hornbeam	15	Yes	FAC	Total Number of Dominant		
3.				Species Across All Strata:	6	(B)
4.						(=)
				Percent of Dominant Species		
6				That Are OBL, FACW, or FAC:	83.3	(A/B)
6 7						(////
8.				Prevalence Index worksheet:		
	45	= Total Cove	r	Total % Cover of:	Multiply by:	
50% of total cover: 22	20% (	of total cover:	9	OBL species 0 x	1 =0	
Sapling/Shrub Stratum (Plot size: r=20')				FACW species 35 x	2 = 70	
1. Carpinus caroliniana / American hornbeam	35	Yes	FAC	FAC species 120 x	3 = 360	
				FACU species 25 x	4 = 100	
2				UPL species 0 x	5 = 0	
3	·			Column Totals: 180 (A	A) 530	(B)
4				`	,	
5 6.				Prevalence Index = B/A =	2.94	
7				Hydrophytic Vegetation Indicator	rs:	
8				1 - Rapid Test for Hydrophytic	Vegetation	
	35	= Total Cove		X 2 - Dominance Test is >50%		
50% of total cover: <u>17</u>	20% (	of total cover:	7	X 3 - Prevalence Index ≤3.0 ¹		
Herb Stratum (Plot size: <u>1 square meter</u> )				Problematic Hydrophytic Vege	tation ¹ (Explain)	
1. Cyperus esculentus / Nut grass	40	Yes	FAC		· · · /	
2. Juncus anthelatus / Poverty rush, Kentucky or poverty rush	35	Yes	FACW	¹ Indicators of hydric soil and wetlan	nd hvdroloav must	
3. Cynodon dactylon / Bermuda grass	25	Yes	FACU	be present, unless disturbed or pro		
4						
5				Definitions of Four Vegetation St	rata	
6						
7				Tree - Woody plants, excluding vine	es, 3 in. (7.6 cm)	or
8				more in diameter at breast height (I	DBH), regardless	of
9				height.		
10						
11				Sapling/Shrub - Woody plants, exc	cludina vines. less	5
12.				than 3 in. DBH and greater than or		
	100	= Total Cove	r	tall.		
50% of total cover: 50	20% (	of total cover:	20			
Woody Vine Stratum (Plot size: r=20')				Herb - All herbaceous (non-woody)	) planta rogardia	c of
1.				size, and woody plants less than 3.		5 01
2.	·			olzo, and woody plants loss than o.		
3	·			Woody vines - All woody vines gre	eater than 3.28 ft i	n
				height.		
5	0	= Total Cove	r	Hydrophytic		
		-				
50% of total cover: 0	20% (	of total cover:	0	Vegetation	No	
				Present? Yes X	No	

(inches)         Color (moist)         %         Color (moist)         %         Type1         Loc2         Texture         Remarks           0-3         10YR 3/2         85         10YR 6/8         15         C         M         clay         dlay           3-18         7.5YR 4/4         80         10YR 6/6         20         C         M         clay loam	Depth	Matrix		Redox	Features					
3-18       7.5YR 4/4       80       10YR 6/6       20       C       M       clay loam         3-18       7.5YR 4/4       80       10YR 6/6       20       C       M       clay loam         3-18       7.5YR 4/4       80       10YR 6/6       20       C       M       clay loam         3-18       7.5YR 4/4       80       10YR 6/6       20       C       M       clay loam         3-18       7.5YR 4/4       80       10YR 6/6       20       C       M       clay loam         3-18       7.5YR 4/4       80       10YR 6/6       20       C       M       clay loam         3-18       7.5YR 4/4       80       10YR 6/6       20       C       M       clay loam         3-10       1       Max 10       1       m       Max 10       1 </th <th>(inches)</th> <th>Color (moist)</th> <th>%</th> <th>Color (moist)</th> <th>%</th> <th>Type¹</th> <th>Loc²</th> <th>Texture</th> <th>Remarks</th> <th></th>	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ^a Location: PL=Pore Lining, M=Matrix         Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils         Histosol (A1)       Polyvalue Below Surface (S8) (LRR S, T, U)       1 cm Muck (A9) (LRR O)         Histis (A3)       Loamy Mucky Mineral (F1) (LRR O)       Reduced Vertic (F18) (outside MLR         Hydrogen Sulfide (A4)       Loamy Mucky Mineral (F1)       Reduced Vertic (F18) (outside MLR         Stratified Layers (A5)       Depleted Matrix (F2)       Piedmont Floodplain Soils (F19) (LR         Granic Bodies (A6) (LRR P, T, U)       X Redox Dark Surface (F6)       (MLRA 153B)         S or Mucky Mineral (A7) (LRR P, T, U)       Depleted Dark Surface (F7)       Red Parent Material (TF2)         Muck (A9) (LRR P, T, U)       Redox Depressions (F8)       Very Shallow Dark Surface (TF12)         1 cm Muck (A9) (LRR P, T)       Mart (F10) (LRR U)       Other (Explain in Remarks)         Depleted Bolow Dark Surface (A12)       Iron-Manganese Masses (F12) (LRR O, P, T) ^a Indicators of hydropphobic vegetation         Sandy Mucky Mineral (S1) (LRR O, S)       Delta Ochric (F17) (MLRA 151)       anomalous Bright Loamy Soils (F20)         Sandy Gleyed Matrix (S6)       Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)       Dark Surface (S7) (LRR P, S, T, U)         Sandy Medx (	0-3	10YR 3/2	85	10YR 6/8	15	С	М	clay		
Aydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils         Histosol (A1)       Polyvalue Below Surface (S8) (LRR S, T, U)       1 cm Muck (A9) (LRR O)         Histosol (A2)       Thin Dark Surface (S9) (LRR S, T, U)       2 cm Muck (A0) (LRR O)         Black Histic (A3)       Loamy Mucky Mineral (F1) (LRR O)       Reduced Vertic (F18) (outside MLR         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Piedmont Floodplain Soils (F19) (LR         Stratified Layers (A5)       Depleted Matrix (F3)       Anomalous Bright Loamy Soils (F20)         Organic Bodies (A6) (LRR P, T, U)       X Redox Dark Surface (F6)       (MLRA 153B)         5 cm Mucky Mineral (A7) (LRR P, T, U)       Redox Depressions (F8)       Very Shallow Dark Surface (TF12)         1 cm Muck (A9) (LRR P, T)       Marl (F10) (LRR U)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Ochric (F11) (MLRA 151)       Other (Explain in Remarks)         Depleted Selow Dark Surface (A12)       Inon-Manganese Masses (F12) (LRR O, P, T)       Indicators of hydropphobic vegetation         Sandy Mucky Mineral (S1) (LRR O, S)       Delta Ochric (F17) (MLRA 150A, 150B)       Indicators of hydropphobic vegetation         Stripped Matrix (S6)       Anomalous Bright Loamy Soils (F20) (MLRA 149A)       Indicators of hydropphobic vegetation         Stripped Matrix (S6)	3-18	7.5YR 4/4	80	10YR 6/6	20	C	М	clay loam		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils         Histosol (A1)       Polyvalue Below Surface (S8) (LRR S, T, U)       1 cm Muck (A9) (LRR O)         Histosol (A2)       Thin Dark Surface (S9) (LRR S, T, U)       2 cm Muck (A9) (LRR O)         Black Histic (A3)       Loamy Mucky Mineral (F1) (LRR O)       Reduced Vertic (F18) (outside MLR         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Piedmont Floodplain Soils (F19) (LR         Stratified Layers (A5)       Depleted Matrix (F3)       Anomalous Bright Loamy Soils (F20)         Organic Bodies (A6) (LRR P, T, U)       X Redox Dark Surface (F6)       (MLRA 153B)         5 cm Mucky Mineral (A7) (LRR P, T, U)       Redox Depressions (F8)       Very Shallow Dark Surface (TF12)         1 cm Muck (A9) (LRR P, T)       Marl (F10) (LRR U)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Ochric (F11) (MLRA 151)       Other (Explain in Remarks)         Depleted Selw Dark Surface (A12)       Iron-Manganese Masses (F12) (LRR O, P, T)       andicators of hydropphobic vegetation         Sandy Mucky Mineral (S1) (LRR O, S)       Delta Ochric (F17) (MLRA 150A, 150B)       anomalous Bright Loamy Soils (F20) (MLRA 149A)         Stripped Matrix (S6)       Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)       Dark Surface (S7) (LRR P, S, T, U)         Res			·							
Histosol (A1)       Polyvalue Below Surface (S8) (LRR S, T, U)       1 cm Muck (A9) (LRR O)         Histic Epipedon (A2)       Thin Dark Surface (S9) (LRR S, T, U)       2 cm Muck (A10) (LRR S)         Black Histic (A3)       Loamy Mucky Mineral (F1) (LRR O)       Reduced Vertic (F18) (outside MLR         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Piedmont Floodplain Soils (F19) (LR         Stratified Layers (A5)       Depleted Matrix (F3)       Anomalous Bright Loamy Soils (F20)         Organic Bodies (A6) (LRR P, T, U)       X Redox Dark Surface (F6)       (MLRA 153B)         5 cm Mucky Mineral (A7) (LRR P, T, U)       Depleted Dark Surface (F7)       Red Parent Material (TF2)         Muck Presence (A8) (LRR P, T)       Marl (F10) (LRR U)       Redox Depressions (F8)       Very Shallow Dark Surface (TF12)         1 cm Muck (A9) (LRR P, T)       Marl (F10) (LRR U)       Other (Explain in Remarks)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Ochric (F11) (MLRA 151)       anidicators of hydropphobic vegetation         Coast Prairie Redox (A16) (MLRA 150A)       Umbric Surface (F13) (LRR P, T, U)       alindicators of hydropphobic vegetation         Sandy Mucky Mineral (S1) (LRR O, S)       Delta Ochric (F17) (MLRA 150A, 150B)       anomalous Bright Loamy Soils (F20) (MLRA 149A)         Sandy Redox (S5)       Piedmont Floodplain Soils (F19) (MLRA 149A)       Anomalous B	Type: C=Cor	ncentration, D=Depletion	n, RM=Reduc	ced Matrix, MS=Mask	ed Sand Gr	ains.		² Location:	PL=Pore Lining, M=N	/atrix.
	Histosol Histic Ep Black Hi Hydroge Stratifiec Organic 5 cm Mu Muck Pr 1 cm Mu Depleted Thick Da Coast Pr Sandy M Sandy G Sandy R Stripped	(A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) Bodies (A6) (LRR P, T, ucky Mineral (A7) (LRR resence (A8) (LRR U) uck (A9) (LRR P, T) d Below Dark Surface (A ark Surface (A12) rairie Redox (A16) (ML Aucky Mineral (S1) (LR Gleyed Matrix (S4) Redox (S5) H Matrix (S6)	U) P, T, U) A11) RA 150A) R O, S)	Polyvalue E Thin Dark S Loamy Muc Loamy Gle Depleted M X Redox Darl Pepleted D Redox Dep Marl (F10) Depleted O Iron-Manga Umbric Sur Delta Ochri Reduced V Piedmont F	Below Surface (S9) ky Mineral ( yed Matrix (F3) & Surface (F ark Surface (F ark Surface (F1) chric (F11) nese Massa face (F13) c (F17) (MI ertic (F18) loodplain So	(LRR S, T (F1) (LRR ( F2) (6) (F7) 3) (MLRA 151 (LRR P, T, I LRA 151) (MLRA 150 (MLRA 150) (I	, U) O) RR O, P, T) J) MA, 150B) MLRA 149 <i>A</i>	<ul> <li>1 cm Muck</li> <li>2 cm Muck</li> <li>Reduced V</li> <li>Piedmont I</li> <li>Anomalous</li> <li>(MLRA 15</li> <li>Red Paren</li> <li>Very Shalk</li> <li>Other (Exp</li> <li>³Indicators of wetland h unless di</li> </ul>	(A9) (LRR O) (A10) (LRR S) (ertic (F18) (outside Floodplain Soils (F19 s Bright Loamy Soils 3B) t Material (TF2) ow Dark Surface (TF ilain in Remarks) f hydropphobic vege nydrology must be pro-	MLRA 150A,B ) (LRR P, S, T) (F20) 12) tation and esent.
	Туре:	• • • •								
Depth (inches):         Hydric Soil Present?         Yes         X         N	Depth (In	icnes):						Hydric Soll Presei	tr Yes X	No

Project/Site:	REDI Arkansas	City/County: Homan To	ownship, Texarkana	, Miller Count	Sampling D	Date: 0	3/04/2021
Applicant/Owner:	AR-TX REDI					Sampling Point: UDP-1	
Investigator(s):	Roger Willis	Section, Township, Ran	ige:				
Landform (hillslope, terrace, etc):	road	Local relief (concave, co		convex		Slope (%):	1
Subregion (LRR or MLRA):				-93.856722		Datum:	WGS 1984
Soil Map Unit Name:	Bossier clay, 0 to 1	percent slopes	N\	WI classificatio	n:	Non-wetla	and
Are climatic / hydrologic conditions of	on the site typical for this time of yea	r? Yes No	X (If no, expl	ain in Remarks	s.)		
Are Vegetation, Soil	, or Hydrologysignific	antly disturbed? A	re "Normal Circums	stances" preser	nt? Ye	s X	No
Are Vegetation, Soil	, or Hydrologynatural	y problematic? (I	lf needed, explain ar	ny answers in I	Remarks.)		
SUMMARY OF FINDINGS - A	Attach site map showing s	ampling point location	ons, transects,	important f	eatures,	etc.	
Hydrophytic Vegetation Present?	Yes No	x					
Hydric Soil Present?		X Is the Samp	led Area				
Wetland Hydrology Present?		X within a We		Yes	No	Х	
Remarks: High precipitation in	preceding weeks						
HYDROLOGY							
Wetland Hydrology Indicators:							
Primary Indicators (minimum of or	ne required: check all that apply)		Ser	condary Indica	tors (minimi	um of two r	eauired)
Surface Water (A1)		auna (B13)		Surface Soil			/
High Water Table (A2)		osits (B15) (LRR U)		- Sparsely Veg		,	ce (B8)
Saturation (A3)	Hydrogen	Sulfide Odor (C1)		Drainage Pa	tterns (B10)	)	
Water Marks (B1)	Oxidized	Rhizospheres along Living R	loots (C3)	Moss Trim Li	ines (B16)		
Sediment Deposits (B2)	Presence	of Reduced Iron (C4)	_	Dry-Season	Water Table	e (C2)	
Drift Deposits (B3)		on Reduction in Tilled Soils (	C6)	_ Crayfish Bur	( )		
Algal Mat or Crust (B4)		< Surface (C7)		Saturation Vi			y (C9)
Iron Deposits (B5)		plain in Remarks)		Geomorphic		2)	
Inundation Visible on Aerial I	magery (B7)			Shallow Aqui	. ,		
Water-Stained Leaves (B9)				FAC-Neutral			
				_ Sphagnum n	1055 (D8) <b>(</b> 1	LRR I, U)	
Field Observations:							
Surface Water Present?	Yes <u>No X</u> Depth (in	nches):					
Water Table Present?	Yes <u>No X</u> Depth (in	1ches):					
Saturation Present?	Yes <u>No X</u> Depth (in	tches):	Wetland Hydrolog	gy Present?	Yes	No	<u>Х</u>
(includes capillary fringe)							
Describe Recorded Data (stream	gauge, monitoring well, aerial photo	s, previous inspection), if av	ailable:				
Remarks:							

# VEGETATION (Four Strata) - Use scientific names of plant

/EGETATION (Four Strata) - Use scientific nam	es of plant	s.			Sampling Po	vint: UE	DP-11
	Absolute	Dominant	Indicator	Dominance Test work	sheet:		
				Number of Dominant S	pecies		
Tree Stratum (Plot size: r=30')	% Cover	Species?	Status	That Are OBL, FACW, o	or FAC:	2	(A)
1. Carpinus caroliniana / American hornbeam	15	Yes	FAC				_ ` `
2				Total Number of Domina	ant		
3				Species Across All Stra		4	(B)
4					<u> </u>		_ (B)
5				Dereent of Deminent St			
6				Percent of Dominant Sp		50.0	
7.				That Are OBL, FACW, o	or FAC:	50.0	(A/B)
8.				Prevalence Index wor	kabaat:		
	15	= Total Cov	er			A	
50% of total cover:		of total cover:		Total % Cover of:		Multiply by:	
Sapling/Shrub Stratum (Plot size: r=20')	2070				0 x 1 =		
		Ma a	54.0		0 x 2 =	0	
1. Carpinus caroliniana / American hornbeam	55	Yes	FAC	FAC species	70 x 3 =	210	
2		·		FACU species	25 x 4 =	100	
3				UPL species	50 x 5 =	250	
4				Column Totals: 1	145 (A)	560	(B)
5					、 /		、 /
6				Prevalence Index	: = B/A =	3.86	
7.						0.00	
8.				Hydrophytic Vegetatio	on Indicators:		
	55	= Total Cov	er	1 - Rapid Test for H		etation	
50% of total cover: 2		of total cover:		2 - Dominance Tes			
Herb Stratum (Plot size: 1 square meter )	20/00			3 - Prevalence Ind			
	50	Yes				n 1 (Eveloie)	
1. <u>Medicago minima / Small bur clover, Burclover</u>	50			Problematic Hydro	priytic vegetatio	nn (⊏xpiain)	
2. Cynodon dactylon / Bermuda grass	25	Yes	FACU				
3				¹ Indicators of hydric soi			st
4				be present, unless distu	urbed or problem	natic.	
5							
6				Definitions of Four Ve	getation Strata	1	
7							
8.				Tree – Woody plants, e	xcluding vines,	3 in. (7.6 cm	ı) or
9.				more in diameter at bre	ast height (DBH	l), regardles:	s of
10				height.			
10		• •					
				Sapling/Shrub - Wood	ly plants exclud	lina vines le	ss
12				than 3 in. DBH and great		0	
	75	= Total Cov		than 5 m. DDi rand grea		(TIII) tan.	
	<u>37</u> 20% (	of total cover	: 15		(		
Woody Vine Stratum (Plot size: r=20')				Herb – All herbaceous		-	ess
1				of size, and woody plan	its less than 3.2	8 ft tall.	
2.							
3.				Woody vine – All wood	ly vines greater	than 3.28 ft	in
4.				height.			
5.							
·		= Total Cov		Hydrophytic			
	0	-		Vegetation			
50% of total cover:		of total cover		-	Yes N	√o X	

S	O	11	

Depth	Matrix			x Features			_				
(inches)	Color (moist)	%	Color (moist)		ype ¹	Loc ²	Texture	Remark	is		
0-16	7.5YR 4/4	90	10YR 6/8	10	С	М	clay				
						·					
						· .					
						·					
¹ Type: C=Cor	ncentration, D=Depletio	n, RM=Redu	ced Matrix, MS=Mas	ked Sand Grains			² Location: PL=	Pore Lining, M	=Matrix.		
•	ndicators: (Applicable	to all LRRs					Indicators for Pro	•	ic Soils³:		
Histosol	· ,			Below Surface (S	<i>,</i> .						
	pipedon (A2)			Surface (S9) (LI			2 cm Muck (A10) (LRR S)				
	istic (A3)			cky Mineral (F1)		J)	Reduced Vertic (F18) (outside MLRA 150A,E     Piedmont Floodplain Soils (F19) (LRR P, S, T				
	en Sulfide (A4)			eyed Matrix (F2)							
	d Layers (A5) Bodies (A6) <b>(LRR P, T</b> ,	IN	·	epleted Matrix (F3) Anomalous Bright Loamy Soils (F20)					iy 30lis (F20)		
	ucky Mineral (A7) (LRR P, I		Redox Dark Surface (F6)     (MLRA 153B)       Depleted Dark Surface (F7)     Red Parent Material (TF2)								
	resence (A8) (LRR U)	F, I, U)	'	pressions (F8)	)		Very Shallow I	( )	FE12)		
	uck (A9) (LRR P, T)			(LRR U)			Other (Explain		1 12)		
	d Below Dark Surface (	<b>\</b> 11)		Dchric (F11) <b>(ML</b>	RA 151	<b>`</b>		in Kentarks)			
<u> </u>	ark Surface (A12)	(11)	·	anese Masses (F			³ Indicators of hy	dropphobic ver	netation and		
	rairie Redox (A16) (ML	RA 150A)	°	rface (F13) <b>(LRI</b>	<i>,</i> .		,	ology must be	•		
	/lucky Mineral (S1) (LR			ric (F17) <b>(MLRA</b>		-,	unless disturbed or problematic.				
	Gleyed Matrix (S4)	,.,		/ertic (F18) (ML		A. 150B)					
	Redox (S5)			Floodplain Soils (			)				
Stripped	Matrix (S6)		Anomalou	s Bright Loamy S	oils (F2	0) <b>(MLRA</b> 1	149A, 153C, 153D)				
Dark Su	rface (S7) (LRR P, S,	r, U)									
Restrictive L	.ayer (if present):										
Туре:											
Depth (in	iches):						Hydric Soil Present?	Yes	No	X	
Remarks:											

Project/Site:	REDI Arkansas	_ City/C	City/County: Homan Township, Texarkana, Miller Count Sampling Da		Sampling Date:	03/04/2021	
Applicant/Owner:		-TX REDI			ate: Arkansas		
Investigator(s):	Roger Willis	Section	on, Township, Ra	inge:			
Landform (hillslope, terrace, etc):	forest floor	Local	relief (concave,	convex, none):	none	Slope	e (%): 0
Subregion (LRR or MLRA):				Long:		Datu	m: WGS 1984
Soil Map Unit Name:		lay, 0 to 1 percent slo	pes		NWI classificatio	n: Nor	n-wetland
Are climatic / hydrologic conditions o	on the site typical for this f	ime of year? Yes	No	X (If no,	explain in Remarks	3.)	
Are Vegetation, Soil	, or Hydrology	significantly distu	rbed?	Are "Normal Circ	cumstances" preser	nt? Yes	X No
	, or Hydrology				ain any answers in I		
SUMMARY OF FINDINGS -				ons, transec	ts, important f	eatures, etc.	
Hydrophytic Vegetation Present?	Yes X	No					
Hydric Soil Present?	Yes X	No	Is the Sam	pled Area			
Wetland Hydrology Present?		No	within a W		Yes X	No	
, , , , , , , , , , , , , , , , , , , ,		<u></u>					
Remarks:							
High precipitation in	preceding weeks						
HYDROLOGY							
Wetland Hydrology Indicators:							
Primary Indicators (minimum of or	ne required: check all that	apply)			Secondary Indica	tors (minimum of	two required)
X Surface Water (A1)	•	Aquatic Fauna (B13)	)		Surface Soil		/
High Water Table (A2)		Marl Deposits (B15)				getated Concave	Surface (B8)
Saturation (A3)		Hydrogen Sulfide Od			Drainage Pa	-	( )
Water Marks (B1)	_	Oxidized Rhizosphe		Roots (C3)	X Moss Trim Li	• •	
Sediment Deposits (B2)	_	Presence of Reduce				Water Table (C2)	
Drift Deposits (B3)		Recent Iron Reduction	( )	(C6)	Crayfish Bur	. ,	
Algal Mat or Crust (B4)	_	Thin Muck Surface (		()		isible on Aerial Im	nagery (C9)
Iron Deposits (B5)	_	Other (Explain in Re				Position (D2)	5 5 ()
Inundation Visible on Aerial Ir	magery (B7)		,		Shallow Aqu	. ,	
Water-Stained Leaves (B9)					X FAC-Neutral	. ,	
						noss (D8) (LRR 1	Г, U)
Field Observations:			2				
Surface Water Present?	Yes X No	Depth (inches):	2				
Water Table Present?	Yes No X					No. a	NI-
Saturation Present?	Yes NoX	Depth (inches):		vvetland Hydi	rology Present?	Yes X	No
(includes capillary fringe)							
Describe Recorded Data (stream	gauge, monitoring well, a	erial photos, previous	s inspection), if a	vailable:			
Remarks:							

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

Sampling Point: <u>T9DP1/WDP-12</u>

<u>Tree Stratum</u> (Plot size: <u>r=30'</u> ) 1. <i>Ulmus rubra I</i> Slippery elm	Absolute <u>% Cover</u> 20	Dominant Species? Yes	Indicator Status FAC	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC:		7	_ (A)
<ol> <li>Carpinus caroliniana / American hornbeam</li> <li>Fagus grandifolia / American beech</li> </ol>	15 10	Yes Yes	FAC FACU	Total Number of Dominant			
4.		103	1400	Species Across All Strata:		8	(B)
5 6 7				Percent of Dominant Species That Are OBL, FACW, or FAC:		87.5	(A/B)
8.				Prevalence Index worksheet:			
	45	= Total Cove		Total % Cover of:	Mu	ltiply by:	
50% of total cover: 22	20% (	of total cover:	9	OBL species 0	x 1 =	0	
Sapling/Shrub Stratum (Plot size: r=20')				FACW species 45	x 2 =	90	
1. Carpinus caroliniana / American hornbeam	15	Yes	FAC	FAC species 115	x 3 =	345	
2		<u> </u>		FACU species 10	x 4 =	40	
3				UPL species 0	x 5 =	0	
4				Column Totals: 170	(A)	475	(B)
5 6							(=)
7.				Prevalence Index = B/A =		2.79	
8.				Hydrophytic Vegetation Indica	tors:		
	15	= Total Cove	er	1 - Rapid Test for Hydrophy		ation	
50% of total cover: 7		of total cover:		X 2 - Dominance Test is >50%			
Herb Stratum (Plot size: 1 square meter )				X 3 - Prevalence Index $\leq 3.0^{1}$			
1. Cyperus esculentus / Nut grass	40	Yes	FAC	Problematic Hydrophytic Ve	actation ¹	(Evolain)	
<ol> <li>Juncus anthelatus / Poverty rush, Kentucky or poverty rush</li> </ol>	30	Yes	FACW		getation	(слрынт)	
3. Ranunculus fascicularis / Early buttercup	25	Yes	FAC	¹ Indicators of hydric soil and wet	land bydr		
4			FAC	be present, unless disturbed or p	•	•••	L
5					04		
6				Definitions of Four Vegetation	Strata:		
7				Tree – Woody plants, excluding	vines. 3 ir	n. (7.6 cm)	or
8				more in diameter at breast heigh		. ,	
9				height.	(22.),	. egui uleee	
10 11							
12				Sapling/Shrub – Woody plants,	excluding	g vines, les	s
12.	95	= Total Cove		than 3 in. DBH and greater than	3.28 ft (1	m) tall.	
50% of total cover: 47		of total cover:				,	
	20%0		19	Herb – All herbaceous (non-woo	dv) plant	s. regardle	ss
Woody Vine Stratum         (Plot size: r=20')           1.         Wisteria frutescens / American wisteria	15	Yes	FACW	of size, and woody plants less th			
2						0.00.0	
3				Woody vine – All woody vines g	reater that	an 3.28 ft ii	ו
4				height.			
5.				Hydrophytic			
	15	= Total Cove	er	Hydrophytic			
50% of total cover:7	20% (	of total cover:	3	Vegetation Present? Yes X	No		
Bemerke (if cheer red, list merphological adaptions holew)				1			

SOIL
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Depth Matrix			Redox	Features						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-4	7.5YR 3/1	100					clay			
4-18	7.5YR 4/2	80	10YR 6/8	20	<u> </u>	Μ	clay			
		·			·					
		·		. <u> </u>						
Type: C=Co	ncentration, D=Depletic	on, RM=Red	uced Matrix, MS=Mask	ed Sand G	rains.		²Location:	: PL=Pore Lining, M=Matrix.		
,,	<i>,</i> ,	,	,					0,		
Histosol	ndicators: (Applicable (A1)	e to all LKK	•		ce (S8) <b>(LF</b>	RR S, T, U)		Problematic Hydric Soils ³ : k (A9) (LRR O)		
Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U)				, U)	2 cm Muc	k (A10) <b>(LRR S)</b>				
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O)				0)	Reduced Vertic (F18) (outside MLRA 150A,B)					
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)					Piedmont	Floodplain Soils (F19) (LRR P, S, T)				
Stratified	d Layers (A5)		Depleted M	atrix (F3)			Anomalou	us Bright Loamy Soils (F20)		
Organic	Bodies (A6) (LRR P, T	; U)	X Redox Dark Surface (F6)				(MLRA 153B)			
 5 cm Mu	ucky Mineral (A7) (LRF	R P, T, U)	Depleted Dark Surface (F7)				Red Parent Material (TF2)			
	resence (A8) (LRR U)		Redox Dep	ressions (F	8)		Very Shallow Dark Surface (TF12)			
	uck (A9) (LRR P, T)		·	Marl (F10) (LRR U)				Other (Explain in Remarks)		
	d Below Dark Surface (	A11)	Depleted O	. ,	(MLRA 151	)	³ Indicators of hydropphobic vegetation and			
·	ark Surface (A12)	,		( )	•					
	rairie Redox (A16) (M	RA 150A)	Iron-Manganese Masses (F12) (LRR O, P, T)				wetland hydrology must be present.			
	/ucky Mineral (S1) (LF			Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151)				unless disturbed or problematic.		
	, ( ) (	(K U, 3)		· , ·	-	A 450D)	uniess c	isturbed of problematic.		
	Gleyed Matrix (S4)			( )	(MLRA 150		<b>`</b>			
	Redox (S5)		Piedmont F							
	Matrix (S6)		Anomalous	Bright Loar	ny Solls (F2	20) <b>(MLRA</b> '	149A, 153C, 153D)			
Dark Su	rface (S7) (LRR P, S,	T, U)								
	₋ayer (if present):									
Type: Depth (in	iches):						Hydric Soil Prese	ent? Yes X No		
Remarks:	·									
vernarks.										

Project/Site:	REDI Arkansas	City/County: Homan Township		· · ·				
Applicant/Owner:	AR-TX REDI		State: Arkansas Sa	mpling Point: T9DP1/WDP-12				
Investigator(s):	Roger Willis	Section, Township, Range:						
Landform (hillslope, terrace, etc):		Local relief (concave, convex, r		Slope (%): 0				
Subregion (LRR or MLRA):			ong: -93.85102	Datum: WGS 1984				
	Bossier clay, 0 to 1 per		NWI classification:	Non-wetland				
	on the site typical for this time of year?		(If no, explain in Remarks.)					
	, or Hydrologysignificant		mal Circumstances" present?	Yes X No				
Are Vegetation, Soil	, or Hydrologynaturally p	roblematic? (If neede	d, explain any answers in Rer	marks.)				
SUMMARY OF FINDINGS -	Attach site map showing san	npling point locations, tra	ansects, important fea	itures, etc.				
Hydrophytic Vegetation Present?	Yes X No							
Hydric Soil Present?	Yes X No	Is the Sampled Are	a					
Wetland Hydrology Present?	Yes No X	within a Wetland?	Yes	No X				
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of c	one required: check all that apply)			s (minimum of two required)				
Surface Water (A1)	Aquatic Faur	ıa (B13)	Surface Soil Cra	acks (B6)				
High Water Table (A2)	Marl Deposit	s (B15) <b>(LRR U)</b>	Sparsely Vegeta	ated Concave Surface (B8)				
Saturation (A3)	Hydrogen St	ılfide Odor (C1)	Drainage Patter	rns (B10)				
Water Marks (B1)	Oxidized Rhi	zospheres along Living Roots (C	3) X Moss Trim Lines	s (B16)				
Sediment Deposits (B2)	Presence of	Reduced Iron (C4)	Dry-Season Wa	ater Table (C2)				
Drift Deposits (B3)	Recent Iron	Reduction in Tilled Soils (C6) Crayfish Burrows (C8)						
Algal Mat or Crust (B4)	Thin Muck S	urface (C7)	Saturation Visib	ble on Aerial Imagery (C9)				
Iron Deposits (B5)	Other (Expla	in in Remarks)	Geomorphic Po	sition (D2)				
Inundation Visible on Aerial	Imagery (B7)		Shallow Aquitar	rd (D3)				
Water-Stained Leaves (B9)			X FAC-Neutral Tes	st (D5)				
				ss (D8) <b>(LRR T, U)</b>				
Field Observations:								
Surface Water Present?	Yes No X Depth (inch	ies):						
Water Table Present?	Yes No X Depth (inch							
Saturation Present?	Yes No X Depth (inch		nd Hydrology Present?	Yes No X				
(includes capillary fringe)		,	, , , , , , , , , , , , , , , , , , ,					
Describe Recorded Data (stream	n gauge, monitoring well, aerial photos, i	previous inspection) if available:						
	gauge, monitoring well, achai photos,							
Remarks:								

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

Sampling Point: <u>T9DP1/WDP-12</u>

				Dominance Test worksheet:				
	Absolute	Dominant	Indicator	Number of Dominant Species				
Tree Stratum (Plot size: r=30')	% Cover	Species?	Status	That Are OBL, FACW, or FAC:		6	(A)	
1. <i>Ulmus rubra /</i> Slippery elm	20	Yes	FAC					
2. Carpinus caroliniana / American hornbeam	15	Yes	FAC	Total Number of Dominant				
3. <i>Fagus grandifolia /</i> American beech	10	Yes	FACU	Species Across All Strata:		7	(B)	
4.							. ,	
5.				Percent of Dominant Species				
6				That Are OBL, FACW, or FAC:	85	5.7	(A/B)	
7.			·				(,,,,,,)	
8.				Prevalence Index worksheet:				
	45	= Total Cov	er	Total % Cover of:	Multip	oly by:		
50% of total cover: 22	20%	of total cover:	9	OBL species 0	x 1 =	0		
Sapling/Shrub Stratum (Plot size: r=20')				FACW species 45	x 2 =	90		
1. Carpinus caroliniana / American hornbeam	15	Yes	FAC	FAC species 105	x 3 =	315		
2.				FACU species 30	x 4 =	120		
				UPL species 0	x 5 =	0		
				Column Totals: 180	(A)	525	(B)	
4 5.							_ ` ´	
				Prevalence Index = B/A =	2.	92		
7								
7				Hydrophytic Vegetation Indica	tors:			
8	45			1 - Rapid Test for Hydrophy	tic Vegetatio	on		
	15	= Total Cov		X 2 - Dominance Test is >50%	)			
	20%	of total cover:	3	X 3 - Prevalence Index ≤3.0 ¹				
Herb Stratum (Plot size: <u>1 square meter</u> )				Problematic Hydrophytic Vegetation ¹ (Explain )				
1. Juncus anthelatus / Poverty rush, Kentucky or poverty rush	30	Yes	FACW					
2. Cyperus esculentus / Nut grass	25	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must				
3. Cynodon dactylon / Bermuda grass	20	No	FACU	be present, unless disturbed or p	-			
4. Toxicodendron radicans / Eastern poison ivy	15	No	FAC					
5. Cardiospermum halicacabum / Balloon vine	15	No	FAC	Definitions of Four Vegetation	Strata			
6								
7				Tree - Woody plants, excluding v	rines, 3 in. (	7.6 cm)	or	
8				more in diameter at breast heigh	t (DBH), reg	gardless	of	
9	·			height.				
10								
11				Sapling/Shrub - Woody plants, o	excludina vi	nes les	\$	
12.				than 3 in. DBH and greater than				
	105	= Total Cov	er	tall.			,	
50% of total cover: 52	20%	_ of total cover:	21					
Woody Vine Stratum (Plot size: r=20')				Herb - All herbaceous (non-wood	du) planta r	agardia	o of	
1. Wisteria frutescens / American wisteria	15	Yes	FACW	size, and woody plants less than		egarules	5 01	
2.				olzo, and woody plants loos alan	0.20 10 101			
0								
	· <u> </u>			Woody vines - All woody vines g	greater thar	1 3.28 ft	n	
4				height.				
5	45	- Total Carr		Hydrophytic				
	15	= Total Cov		Hydrophytic				
50% of total cover: 7	20%	of total cover:	3	Vegetation				
				Present? Yes X	No	<u> </u>		

SOIL
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Depth Matrix			Redox	Features						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-4	7.5YR 3/1	100					clay			
4-18	7.5YR 4/2	80	10YR 6/8	20	<u> </u>	Μ	clay			
		·			·					
		·		. <u> </u>						
Type: C=Co	ncentration, D=Depletic	on, RM=Red	uced Matrix, MS=Mask	ed Sand G	rains.		²Location:	: PL=Pore Lining, M=Matrix.		
,,	<i>,</i> ,	,	,					0,		
Histosol	ndicators: (Applicable (A1)	e to all LKK	•		ce (S8) <b>(LF</b>	RR S, T, U)		Problematic Hydric Soils ³ : k (A9) (LRR O)		
Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U)				, U)	2 cm Muc	k (A10) <b>(LRR S)</b>				
Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O)				0)	Reduced Vertic (F18) (outside MLRA 150A,B)					
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)					Piedmont	Floodplain Soils (F19) (LRR P, S, T)				
Stratified	d Layers (A5)		Depleted M	atrix (F3)			Anomalou	us Bright Loamy Soils (F20)		
Organic	Bodies (A6) (LRR P, T	; U)	X Redox Dark Surface (F6)				(MLRA 153B)			
 5 cm Mu	ucky Mineral (A7) (LRF	R P, T, U)	Depleted Dark Surface (F7)				Red Parent Material (TF2)			
	resence (A8) (LRR U)		Redox Dep	ressions (F	8)		Very Shallow Dark Surface (TF12)			
	uck (A9) (LRR P, T)		·	Marl (F10) (LRR U)				Other (Explain in Remarks)		
	d Below Dark Surface (	A11)	Depleted O	. ,	(MLRA 151	)	³ Indicators of hydropphobic vegetation and			
·	ark Surface (A12)	,		( )	•					
	rairie Redox (A16) (M	RA 150A)	Iron-Manganese Masses (F12) (LRR O, P, T)				wetland hydrology must be present.			
	/ucky Mineral (S1) (LF			Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151)				unless disturbed or problematic.		
	, ( ) (	(K U, 3)		· , ·	-	A 450D)	uniess c	isturbed of problematic.		
	Gleyed Matrix (S4)			( )	(MLRA 150		<b>`</b>			
	Redox (S5)		Piedmont F							
	Matrix (S6)		Anomalous	Bright Loar	ny Solls (F2	20) <b>(MLRA</b> '	149A, 153C, 153D)			
Dark Su	rface (S7) (LRR P, S,	T, U)								
	₋ayer (if present):									
Type: Depth (in	iches):						Hydric Soil Prese	ent? Yes X No		
Remarks:	·									
vernarks.										

Project/Site:	REDI Arkansas	City/County: Homan To	wnship, Texarkana, Miller C	ount Sampling Date	e: 03/04/2021		
Applicant/Owner:	AR-TX REDI		State: Arkans				
Investigator(s):	Roger Willis	Section, Township, Rang	ge:				
Landform (hillslope, terrace, etc):	road	Local relief (concave, co	onvex, none): c	onvex Sl	ope (%): 1		
Subregion (LRR or MLRA):				50803 Da	atum: WGS 1984		
Soil Map Unit Name:	Bossier clay, 0 to 1 p	ercent slopes	NWI classi	fication: N	lon-wetland		
Are climatic / hydrologic conditions of	on the site typical for this time of year	? Yes No	X (If no, explain in Re	marks.)			
Are Vegetation, Soil	, or Hydrologysignifica	ntly disturbed? Ar	re "Normal Circumstances"	present? Yes	X No		
Are Vegetation, Soil	, or Hydrologynaturally	/ problematic? (If	needed, explain any answe	ers in Remarks.)			
SUMMARY OF FINDINGS - A	Attach site map showing sa	ampling point location	ns, transects, import	ant features, et	С.		
Hydrophytic Vegetation Present?	Yes No X						
Hydric Soil Present?	Yes No X	Is the Sample	ed Area				
Wetland Hydrology Present?	Yes No X			No >	<		
Remarks: High precipitation in	preceding weeks						
HYDROLOGY							
Wetland Hydrology Indicators:							
Primary Indicators (minimum of or	ne required: check all that apply)		Secondary	Indicators (minimum	of two required)		
Surface Water (A1)	Aquatic Fa	una (B13)		e Soil Cracks (B6)	/		
High Water Table (A2)	Marl Depo	sits (B15) (LRR U)	Sparse	ely Vegetated Conca	ve Surface (B8)		
Saturation (A3)	Hydrogen	Sulfide Odor (C1)	Draina	ige Patterns (B10)			
Water Marks (B1)	Oxidized F	hizospheres along Living Ro	oots (C3) Moss	Trim Lines (B16)			
Sediment Deposits (B2)	Presence of	of Reduced Iron (C4)	Dry-Se	eason Water Table (C	2)		
Drift Deposits (B3)		Reduction in Tilled Soils (C6) Crayfish Burrows (C8)					
Algal Mat or Crust (B4)		Surface (C7) Saturation Visible on Aerial Imagery (C9)					
Iron Deposits (B5)		lain in Remarks)		orphic Position (D2)			
Inundation Visible on Aerial I	magery (B7)			w Aquitard (D3)			
Water-Stained Leaves (B9)				leutral Test (D5)	<b>D T</b> 11		
			Spnag	num moss (D8) <b>(LR</b>	K I, U)		
Field Observations:							
Surface Water Present?	Yes NoX Depth (in	ches):					
Water Table Present?	Yes NoX Depth (in	ches):					
Saturation Present?	Yes <u>No X</u> Depth (in	ches):	Wetland Hydrology Prese	ent? Yes	No X		
(includes capillary fringe)							
Describe Recorded Data (stream	gauge, monitoring well, aerial photos	, previous inspection), if ava	ailable:				
		,.					
Remarks:							

## VEGETATION (Four Strata) - Use scientific names of plan

of plant	s.		Sampling Point:	UDP-12
Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:           Number of Dominant Species           That Are OBL, FACW, or FAC:         1	(A)
			Total Number of Dominant	

Tree Stratum (Plot size: r=30')	% Cover	Species?	Status	Number of Dominant Species			
1.				That Are OBL, FACW, or FAC:	1	(A)	
2.							
3.				Total Number of Dominant			
4.				Species Across All Strata:	2	(B)	
5.							
6.				Percent of Dominant Species			
7.				That Are OBL, FACW, or FAC:	50.0	(A/B)	
8.				Prevalence Index worksheet:			
	0	= Total Cove	r	Total % Cover of:	Multiply by:		
50% of total cover: 0	20%	of total cover:	0		(1 = 0		
Sapling/Shrub Stratum (Plot size: r=20')				· · · · · · · · · · · · · · · · · · ·	(2 = 30)		
<u>1.</u>				· · · · · · · · · · · · · · · · · · ·			
0							
				· · · · · · · · · · · · · · · · · · ·	(4 = 120		
					c 5 = <u>50</u>		
F				Column Totals: <u>55</u> (	A) 200	(B)	
6							
				Prevalence Index = B/A =	3.64		
				Hydrophytic Vegetation Indicato	ors:		
8	0	= Total Cove		1 - Rapid Test for Hydrophytic			
50% of total cover: 0		of total cover:		2 - Dominance Test is >50%	vegetation		
	20 /0		0				
Herb Stratum (Plot size: <u>1 square meter</u> )	00	X	54.011	3 - Prevalence Index ≤3.0 ¹			
1. Cynodon dactylon / Bermuda grass	30	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)			
2. <u>Andropogon glomeratus / Bushy bluestem</u>	15	Yes	FACW				
3. Medicago minima / Small bur clover, Burclover	10	No	UPL	¹ Indicators of hydric soil and wetlan		st	
4				be present, unless disturbed or pro	oblematic.		
5				Definitions of Four Vegetation S	trata		
6					tiutu.		
7				Tree – Woody plants, excluding vir	nes 3 in (76 cm	u) or	
8				more in diameter at breast height (	•		
9					DDIT), regardles	5 01	
10				height.			
11							
12				Sapling/Shrub – Woody plants, ex	-	SS:	
	55	= Total Cove	r	than 3 in. DBH and greater than 3.	28 ft (1 m) tall.		
50% of total cover: 27	20%	of total cover:	11				
Woody Vine Stratum (Plot size: r=20')				Herb – All herbaceous (non-woody	y) plants, regardl	ess	
1.				of size, and woody plants less than	n 3.28 ft tall.		
2.							
3.	•			Woody vine - All woody vines gre	ater than 3.28 ft	in	
4.				height.			
5.							
·	0	= Total Cove		Hydrophytic			
		-		Vegetation			
50% of total cover: 0	20%	of total cover:	0	Present? Yes	No X		

S	O	11	

(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remar	ks	
0-18	7.5YR 4/3	80	10YR 6/6	20	C	M	sandy clay			
		- <u> </u>								
Type: C=Co	ncentration, D=Depletio	on, RM=Redu	ced Matrix, MS=Mas	ked Sand Gra	ains.		²Location: Pl	_=Pore Lining, N	1=Matrix.	
vdric Soil I	ndicators: (Applicabl	e to all LRRs	, unless otherwise I	noted.)			Indicators for Pr	oblematic Hydı	ic Soils ³ :	
Histosol				, Below Surfac	e (S8) <b>(LF</b>	R S, T, U)		A9) (LRR O)		
Histic Epipedon (A2)				Surface (S9)	. , .			A10) (LRR S)		
Black Hi	istic (A3)		Loamy Mucky Mineral (F1) (LRR O)				Reduced Vertic (F18) (outside MLRA 150A,B			
Hydrogen Sulfide (A4)			Loamy Gleyed Matrix (F2)				Piedmont Floodplain Soils (F19) (LRR P, S, T)			
Stratified Layers (A5)			Depleted Matrix (F3)				Anomalous Bright Loamy Soils (F20)			
Organic	Bodies (A6) (LRR P, 1	r. U)	Redox Dark Surface (F6)				(MLRA 153B)			
_	ucky Mineral (A7) (LRI		Depleted Dark Surface (F7)				Red Parent Material (TF2)			
	resence (A8) (LRR U)	, -, -,	Redox Depressions (F8)				Very Shallow Dark Surface (TF12)			
	uck (A9) (LRR P, T)		Marl (F10) (LRR U)				Other (Explain in Remarks)			
	d Below Dark Surface (	(Δ11)		. ,	MI RA 151	<b>`</b>				
	ark Surface (A12)	(411)	Depleted Ochric (F11) (MLRA 151)				³ Indicators of hydropphobic vegetation and			
	( )		Iron-Manganese Masses (F12) (LRR O, P, T)				wetland hydrology must be present.			
	rairie Redox (A16) (M		Umbric Surface (F13) (LRR P, T, U)							
_ `	Nucky Mineral (S1) (LI	R 0, 5)	Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B)				unless disturbed or problematic.			
	Gleyed Matrix (S4)			· / ·		• •				
	Redox (S5)			loodplain So						
	l Matrix (S6)		Anomalous	Bright Loam	y Soils (F2	0) <b>(MLRA</b>	149A, 153C, 153D)			
Dark Su	rface (S7) (LRR P, S,	T, U)								
Restrictive L Type:	₋ayer (if present):									
Depth (in	iches):						Hydric Soil Present	? Yes	No X	
Remarks:										

Project/Site:	REDI Arkansas	City/County: Homan Tow	, ∕nship, Texarkana, №	Ailler Count Sampling	Date: 10/20/2021			
Applicant/Owner:	AR-TX REDI		State: /	Arkansas Sampling	Point: WDP-A			
Investigator(s):	Roger Willis	Section, Township, Range	e:					
Landform (hillslope, terrace, etc):		Local relief (concave, cor		concave	Slope (%): 0			
Subregion (LRR or MLRA):			·	-93.853648	Datum: WGS 1984			
Soil Map Unit Name:			_	classification:	PFO1A			
	n the site typical for this time of year?	•	(If no. explain	n in Remarks.)				
			e "Normal Circumsta	,	es X No			
	, or Hydrology naturally p			answers in Remarks.)				
	Attach site map showing sar			,				
			<u>,</u>	<u>-portante contante c</u>	, ••••			
Hydrophytic Vegetation Present?								
Hydric Soil Present?								
Wetland Hydrology Present?	Yes <u>X</u> No	within a Wetla	and ?	Yes X No				
Remarks:								
HYDROLOGY								
Wetland Hydrology Indicators:			0					
Primary Indicators (minimum of on	1 11 2/			ndary Indicators (minim	. , _			
Surface Water (A1)	Aquatic Fau	. ,		Surface Soil Cracks (B	,			
High Water Table (A2)		ts (B15) <b>(LRR U)</b>		Sparsely Vegetated Co				
X Saturation (A3)		ulfide Odor (C1)		Drainage Patterns (B10				
Water Marks (B1) Sediment Deposits (B2)		izospheres along Living Roo Reduced Iron (C4)		Moss Trim Lines (B16)				
		( )		Dry-Season Water Tabl	ie (C2)			
Drift Deposits (B3)		Reduction in Tilled Soils (C6) <u>X</u> Crayfish Burrows (C8)						
Algal Mat or Crust (B4)	Thin Muck S	Surface (C7)       Saturation Visible on Aerial Imagery (C9)         ain in Remarks)       Geomorphic Position (D2)						
Iron Deposits (B5) Inundation Visible on Aerial Ir		in in Remarks)			J2)			
Water-Stained Leaves (B9)	nagery (B7)			Shallow Aquitard (D3) FAC-Neutral Test (D5)				
			`	Sphagnum moss (D8)	(LKK I, U)			
Field Observations:								
Surface Water Present?	Yes No X Depth (inch	nes):						
Water Table Present?	Yes No X Depth (inch							
Saturation Present?	Yes X No Depth (inch	nes): 3 V	Wetland Hydrology	Present? Yes	X No			
(includes capillary fringe)		·		—				
Describe Recorded Data (stream a		nrovious inspection) if avai	ilabla:					
Describe Recorded Data (stream g	gauge, monitoring well, aerial photos,	previous inspection), il avai	lable.					
Remarks:								

# VEGETATION (Four Strata) - Use scientific names of plants

VEGETATION (Four Strata) - Use scientific names		nt: W	WDP-A					
				Dominance Test w	vorksheet:			
	Absolute	Dominant	Indicator	Number of Domina				
Tree Stratum (Plot size: r=30')	% Cover	Species?	Status	That Are OBL, FAC			1	(A)
1. Quercus nigra / Water oak	55	Yes	FAC		,		•	_ (**)
				Total Number of Do	minant			
2				Species Across All			1	(P)
3.				Species Across Air	Silala.		1	_ (B)
4				Demonstrat Demois				
5	·			Percent of Dominal	•		400.0	
6				That Are OBL, FAC	W, or FAC:		100.0	(A/B)
7				Prevalence Index	workshoot.			
8				Total % Cover		Ν.4.	ultiply by:	
	55	= Total Cov		-				
50% of total cover: 27	20% (	of total cover	:11	OBL species	0	x1=	0	
Sapling/Shrub Stratum (Plot size: r=20')				FACW species	0	x 2 = _	0	
1				FAC species	55	x 3 =	165	
2				FACU species	0	x 4 =	0	
3				UPL species	0	x 5 =	0	
4.				Column Totals:	55	(A)	165	(B)
5.								
6.				Prevalence Ir	ndex = B/A =	: <u> </u>	3.0	
7.								
8.				Hydrophytic Vege				
	0	= Total Cov	er	1 - Rapid Test			tation	
50% of total cover: 0	20% (	of total cover		X 2 - Dominance				
Herb Stratum (Plot size: 1 sq. meter )				X 3 - Prevalence				
				Problematic H	ydrophytic V	egetation	¹ (Explain )	)
				¹ Indicators of hydrid	c soil and we	tland hyd	Irology mus	st
3.				be present, unless	disturbed or	problema	atic.	
4.								
5				Definitions of Fou	r Vegetatior	n Strata		
6								
7				Tree - Woody plant				
8				more in diameter a	t breast heig	ht (DBH),	regardles	s of
9				height.				
10								
11				Sapling/Shrub - W	loody plants,	excludin	g vines, les	SS
12				than 3 in. DBH and	greater than	n or equal	to 3.28 ft	(1 m)
	0	= Total Cov	er	tall.				
50% of total cover: 0	20% (	of total cover	: 0					
Woody Vine Stratum (Plot size: r=20')				Herb - All herbaced	ous (non-woo	odv) plant	ts. regardle	ess of
1				size, and woody pla				
2								
3.				Woody vines - All	woody vines	areater t	han 3 28 ft	in
4.				height.	woody vines	greater t	11411 0.20 1	
5.								
	0	= Total Cov	er	Hydrophytic				
50% of total cover: 0		of total cover		Vegetation				
	20700			Present?	Yes 📝	X No	<b>.</b>	
					100 /		·	

Remarks: (if observed, list morphological adaptions below). Floor covered in dead leaves

S	O	11	

Profile Descr Depth	r <mark>iption: (Describe to th</mark> Matrix	e depth nee		<b>e indicator o</b> Features	or confirm	the absen	ce of indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-18	7.5YR 2.5/1	80	7.5YR 4/6	20	<u>C</u>	M	silty clay	
¹ Type: C=Cor		n, RM=Reduc	ed Matrix, MS=Mask	ed Sand Gra	  ins.		2Location	n: PL=Pore Lining, M=Matrix.
Histosol Histic Ep Black His Hydroge Stratified Organic 5 cm Mu Muck Pro 1 cm Mu Depletec Thick Da Coast Pr Sandy M Sandy G Sandy R Stripped	vipedon (A2)	U) P, T, U) \11) RA 150A) R O, S)	Polyvalue B Thin Dark S Loamy Mucl Loamy Gley Depleted Ma X Redox Dark Depleted Da Redox Depr Marl (F10) Depleted Oa Iron-Mangaa Umbric Surf Delta Ochric Reduced Ve Piedmont Fl	elow Surface (S9) ky Mineral (F red Matrix (F2) atrix (F3) Surface (F6) ark Surface (F6) (LRR U) (LRR U) chric (F11) (M nese Masses face (F13) (L c (F17) (MLF ertic (F18) (M loodplain Soi	(LRR S, T 1) (LRR ( 2) ) F7) MLRA 151 5 (F12) (LR .RR P, T, U RA 151) MLRA 150 Is (F19) (M	; U) D) R O, P, T) J) A, 150B) MLRA 149A	1 cm Muc 2 cm Muc Reduced Piedmon Anomalo (MLRA 1 Red Pare Very Sha Other (E) ³ Indicators wetlanc unless o	ent Material (TF2) Illow Dark Surface (TF12) xplain in Remarks) of hydropphobic vegetation and d hydrology must be present. disturbed or problematic.
Restrictive L Type: Depth (inc	ayer (if present):						Hydric Soil Pres	ent? Yes X No
Remarks:								

Project/Site:	REDI Arkansas	City/County: Homan	Township, Texarka	ana, Miller Count	Sampling Date:	10/20/2021
Applicant/Owner:	AR-TX RED	<u> </u>	Stat	e: Arkansas	Sampling Point:	UDP-A
Investigator(s):	Roger Willis	Section, Township, Ra				
	field	Local relief (concave,	-	none	Slope	e (%): 0
Subregion (LRR or MLRA):		at: 33.547382		-93.852828	B Datu	m: WGS 1984
Soil Map Unit Name:	Bossier clay, 0 to 1			NWI classificatio	n: Nor	n-wetland
Are climatic / hydrologic conditions	on the site typical for this time of ye	ear? Yes X No	(If no, e	xplain in Remarks	s.)	
Are Vegetation, Soil			Are "Normal Circu	umstances" prese	nt? Yes	X No
Are Vegetation , Soil			(If needed, explain	n any answers in	Remarks.)	
SUMMARY OF FINDINGS -	Attach site map showing	sampling point locati	ons, transect	s, important f	features, etc.	
Hydrophytic Vegetation Present?			· · · ·	•	-	
Hydric Soil Present?	Yes X No		pled Area			
Wetland Hydrology Present?	Yes No		•	Yes	No X	
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators:						
Primary Indicators (minimum of o				Secondary Indica	tors (minimum of	two required)
Surface Water (A1)	1 11 11	Fauna (B13)		Surface Soil		(wo required)
High Water Table (A2)		posits (B15) (LRR U)			getated Concave	Surface (B8)
Saturation (A3)		en Sulfide Odor (C1)		Drainage Pa		
Water Marks (B1)		d Rhizospheres along Living	Roots (C3)	Moss Trim L		
Sediment Deposits (B2)		ce of Reduced Iron (C4)			Water Table (C2)	
Drift Deposits (B3)		Iron Reduction in Tilled Soils	(C6)	Crayfish Bur		
Algal Mat or Crust (B4)		ick Surface (C7)	()		isible on Aerial Im	nagery (C9)
Iron Deposits (B5)		Explain in Remarks)			Position (D2)	0 9 ( )
Inundation Visible on Aerial		. ,		 Shallow Aqu	. ,	
Water-Stained Leaves (B9)				FAC-Neutral		
				Sphagnum r	noss (D8) (LRR 1	Г, U)
Field Observations:	Vac Na V Danth	(inches).				
Surface Water Present?		(inches):				
Water Table Present?		(inches):	Wetlend Lluder	la my Dragont?	Vaa	No. V
Saturation Present?	Yes <u>No X</u> Depth	(inches):	wetland Hydro	ology Present?	Yes	<u>No X</u>
(includes capillary fringe)						
Describe Recorded Data (stream	gauge, monitoring well, aerial pho	tos, previous inspection), if a	vailable:			
Remarks:						

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

VEGETATION (Four Strata) - Use scientific names	s of plant	s.			Samp	ling Poir	nt: U	DP-A
				Dominance Test wo	orksheet:			
	Absolute	Dominant	Indicator	Number of Dominant				
Tree Stratum (Plot size: r=30')	% Cover	Species?	Status	That Are OBL, FACW	•		2	(A)
1. Carpinus caroliniana / American hornbeam	20	Yes	FAC		.,		_	_ (**)
2. Fagus grandifolia / American beech	10	Yes	FACU	Total Number of Dom	ninant			
2				Species Across All S			4	(B)
			·		tiata.			_ (0)
4 5			·	Percent of Dominant	Snecies			
6.				That Are OBL, FACW	•		50.0	(A/B)
7.						-	00.0	_ (/ ( = )
8.				Prevalence Index w	orksheet:			
	30	= Total Cove	r	Total % Cover of	of:	Mu	ultiply by:	
50% of total cover: 15		of total cover:		OBL species	0	x 1 =	0	
Sapling/Shrub Stratum (Plot size: r=20')				FACW species	0	x 2 =	0	
				FAC species	95	x 3 =	285	
1 2			·	FACU species	55	x 4 =	220	
3				UPL species	10	x 5 =	50	
3				Column Totals:	160	(A)	555	(B)
5				Prevalence Ind	iex = B/A =		3.47	
7 8	<u></u>			Hydrophytic Vegeta				
·	0	= Total Cove	r	1 - Rapid Test fo			tation	
50% of total cover: 0		of total cover:		2 - Dominance 1		6		
Herb Stratum (Plot size: 1 sq. meter )				3 - Prevalence l				
1. Cynodon dactylon / Bermuda grass	45	Yes	FACU	Problematic Hyd	Irophytic Ve	egetation	¹ (Explain )	)
2. Cardiospermum halicacabum / Balloon vine	25	Yes	FAC					
3. Solidago rugosa / Wrinkle-leaf goldenrod	20	No	FAC	¹ Indicators of hydric s		-		st
4. Ambrosia trifida / Giant ragweed	15	No	FAC	be present, unless di	sturbed or p	problema	atic.	
5. Toxicodendron radicans / Eastern poison ivy	15	No	FAC	Definitions of Four	Vagatation	Strata		
6. <i>Medicago minima /</i> Small bur clover, Burclover	10	No	UPL	Deminions of Four	vegetation	Strata		
7.				Tree - Woody plants,	evoluding	vines 3 i	n (76 cm)	lor
8.				more in diameter at b				
9.				height.	5	( ),	5	
10								
11				Sapling/Shrub - Wo	odv plante	evoludin	a vines les	20
12.				than 3 in. DBH and g				
	130	= Total Cove	r	tall.		•		<b>、</b> ,
50% of total cover: 65	20% (	of total cover:	26					
Woody Vine Stratum (Plot size: r=20')				Herb - All herbaceou	is (non woo	dy) plant	e regardle	se of
1.				size, and woody plan	•			55 01
2.				,, p				
3.				Woody vines - All w	oody yinoo	aroator t	han 2 20 ft	in
4.				height.	bouy vines	greater t	11a11 3.20 II	. 11 1
5.								
	0	= Total Cove	r	Hydrophytic				
50% of total cover: 0	20% (	of total cover:		Vegetation				
				Present?	Yes	No	x <u>x</u>	

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•	Matrix			Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	7.5YR 2.5/1	85	7.5YR 6/8	15	<u> </u>	M	clay	
Гуре: С=Со	ncentration, D=Depletio	n, RM=Reduc	ced Matrix, MS=Mask	ed Sand Gr	ains.		² Location: I	PL=Pore Lining, M=Matrix.
ydric Soil	ndicators: (Applicable	e to all LRRs,	unless otherwise n	oted.)			Indicators for F	Problematic Hydric Soils ³ :
Black H Hydroge Stratifie Organic 5 cm Mu Muck Pu 1 cm Mu Deplete Thick D Coast P Sandy M	I (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) Bodies (A6) (LRR P, T, Lacky Mineral (A7) (LRR resence (A8) (LRR U) Lack (A9) (LRR P, T) d Below Dark Surface (A ark Surface (A12) rairie Redox (A16) (ML Mucky Mineral (S1) (LR Sleyed Matrix (S4)	A11) <b>RA 150A)</b>	Polyvalue B Thin Dark S Loamy Muc Loamy Gley Depleted M X Redox Dark Redox Depl Marl (F10) Redox Cepl Iron-Manga Umbric Surf Reduced Ve	urface (S9) ky Mineral ( ved Matrix (I atrix (F3) Surface (F ark Surface (F ark Surface (LRR U) chric (F11) nese Masse face (F13) c (F17) (ML	(LRR S, T (F1) (LRR ( F2) 6) (F7) 3) (MLRA 151 es (F12) (LF (LRR P, T, I -RA 151)	, U) O) RR O, P, T) J)	2 cm Muck Reduced V Piedmont F Anomalous (MLRA 153 Red Paren Very Shalld Other (Exp ³ Indicators o wetland h	<ul> <li>(A9) (LRR O)</li> <li>(A10) (LRR S)</li> <li>fertic (F18) (outside MLRA 150A,B</li> <li>Floodplain Soils (F19) (LRR P, S, T)</li> <li>a Bright Loamy Soils (F20)</li> <li>BB)</li> <li>t Material (TF2)</li> <li>bw Dark Surface (TF12)</li> <li>lain in Remarks)</li> <li>f hydropphobic vegetation and hydrology must be present.</li> <li>sturbed or problematic.</li> </ul>
Stripped	Redox (S5) I Matrix (S6) Irface (S7) <b>(LRR P, S,</b> 1	T, U)	Piedmont F Anomalous				) 149A, 153C, 153D)	
estrictive I	_ayer (if present):							
Туре:								
Depth (ir	iches):						Hydric Soil Preser	t? Yes X No

Project/Site:	REDI Arkansas	City/County: Homan Township, Tex;	arkana, Miller Count Sampling Date:	10/20/2021
Applicant/Owner:	AR-TX REDI		State: Arkansas Sampling Point:	WDP-B
Investigator(s):	Roger Willis	Section, Township, Range:		
Landform (hillslope, terrace, etc):	depression	Local relief (concave, convex, none)	): concave Slop	be (%): 0
Subregion (LRR or MLRA):		33.547358 Long:	-93.850057 Datu	um: WGS 1984
Soil Map Unit Name:	Bossier clay, 0 to 1 per	cent slopes	NWI classification: No	n-wetland
Are climatic / hydrologic conditions	on the site typical for this time of year?	Yes X No (If n	no, explain in Remarks.)	
Are Vegetation , Soil	, or Hydrology significant	ly disturbed? Are "Normal C	Circumstances" present? Yes	X No
Are Vegetation , Soil	, or Hydrology naturally p	vroblematic? (If needed, ex	plain any answers in Remarks.)	
SUMMARY OF FINDINGS -	Attach site map showing san	npling point locations, transe	ects, important features, etc.	
Hydrophytic Vegetation Present?	Yes X No	· · · ·		
Hydric Soil Present?	Yes X No	Is the Sampled Area		
Wetland Hydrology Present?	Yes X No	within a Wetland?	Yes X No	
Remarks:				
HYDROLOGY				
Wetland Hydrology Indicators:				
Primary Indicators (minimum of o			Secondary Indicators (minimum of	f two required)
Surface Water (A1)	Aquatic Faun	na (B13)	Surface Soil Cracks (B6)	<u>, , , , , , , , , , , , , , , , , </u>
High Water Table (A2)	Marl Deposit	s (B15) (LRR U)	X Sparsely Vegetated Concave	Surface (B8)
X Saturation (A3)		llfide Odor (C1)	Drainage Patterns (B10)	
Water Marks (B1)	Oxidized Rhi	zospheres along Living Roots (C3)	Moss Trim Lines (B16)	
Sediment Deposits (B2)	Presence of	Reduced Iron (C4)	Dry-Season Water Table (C2	)
Drift Deposits (B3)	Recent Iron F	Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)	
Algal Mat or Crust (B4)	Thin Muck St	urface (C7)	Saturation Visible on Aerial Ir	nagery (C9)
Iron Deposits (B5)	Other (Explai	in in Remarks)	Geomorphic Position (D2)	
Inundation Visible on Aerial	Imagery (B7)		Shallow Aquitard (D3)	
Water-Stained Leaves (B9)			X FAC-Neutral Test (D5)	
			Sphagnum moss (D8) (LRR	T, U)
Field Observations:				
Surface Water Present?	Yes No X Depth (inch	200);		
Water Table Present?	Yes No X Depth (inch Yes No X Depth (inch	·		
Saturation Present?		·	ydrology Present? Yes X	No
(includes capillary fringe)	Yes X No Depth (inch		ydrology Present? Yes X	
(includes capillary ininge)				
Describe Recorded Data (stream	gauge, monitoring well, aerial photos, p	previous inspection), if available:		
Demerilari				
Remarks:				

/EGETATION (Four Strata) - Use scientific names	of plant	s.			Sam	pling Poi	nt: W	DP-B
				Dominance Test v	worksheet:			
	Absolute	Dominant	Indicator	Number of Domina	ant Species			
Trop Stratum (Plot size: $r=20$ )					•		2	(A)
Tree Stratum (Plot size: r=30')	% Cover	Species?	Status	That Are OBL, FAC	SVV, OF FAC:		2	(A)
2				Total Number of Do	ominant			
							0	
3				Species Across All	Strata:		2	(B)
4				Dans at a Dansing				
5				Percent of Domina	•			
6				That Are OBL, FAC	CW, or FAC:		100.0	(A/B)
7				Prevalence Index	worksheet:			
8		= Total Cov		Total % Cove		М	ultiply by:	
	0	-		OBL species	0	x 1 =	0	
50% of total cover: 0	20% 0	of total cover:	0	FACW species	65	x 2 =	130	
Sapling/Shrub Stratum (Plot size:r=20')				FAC species	40	x 3 =		
1				· · -	-		120	
2			<u> </u>	FACU species	0	x 4 =	0	
3				UPL species	0	x 5 =	0	
4.				Column Totals:	105	(A)	250	(B)
5.								
6				Prevalence I	ndex = B/A =	·	2.38	
7				l hadaa a hadaa Maaa				
8.				Hydrophytic Vege				
	0	= Total Cov	er	1 - Rapid Test			etation	
50% of total cover: 0	20% (	- of total cover:	. 0	X 2 - Dominance				
Herb Stratum (Plot size: 1sq. meter )				X 3 - Prevalence				
1. Juncus torreyi / Torrey's rush, Torrey's rush	65	Yes	FACW	Problematic H	lydrophytic V	egetatior	¹ (Explain )	)
<ol> <li>Polygonum aviculare / Prostrate knotweed, Knotweed, Knot</li> </ol>		Yes	FAC					
			TAU	¹ Indicators of hydri	ic soil and we	tland hyd	drology mus	st
3				be present, unless	disturbed or	problem	atic.	
4								
5 6.				Definitions of Fou	ur Vegetation	1 Strata		
·								
7				Tree - Woody plan				
8				more in diameter a height.	it breast neig	nt (DBH)	, regardiess	s of
9				noight.				
10								
11				Sapling/Shrub - V				
12				than 3 in. DBH and	d greater thar	ı or equa	al to 3.28 ft (	(1 m)
	105	= Total Cov	er	tall.				
50% of total cover: <u>52</u>	20% (	of total cover:	21					
Woody Vine Stratum (Plot size: r=20')				Herb - All herbace	ous (non-woo	ody) plan	its, regardle	ss of
1				size, and woody pl	lants less tha	n 3.28 ft	tall.	
2								
3				Woody vines - All	woody vines	areater	than 3 28 ft	in
4.				height.	needy milee	groutor		
5.				-				
	0	= Total Cov	er	Hydrophytic				
50% of total cover: 0	20% (	- of total cover:		Vegetation				
				Present?	Yes 📝	X N	0	
				-				

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Profile Descr Depth	<b>iption: (Describe to th</b> Matrix	e depth need		e indicator or co Features	nfirm th	e absen	ce of indicators.)				
(inches)	Color (moist)	%	Color (moist)	% Typ	)e ¹	Loc ²	Texture	Remark	s		
0-18	7.5YR 2.5/1	85	5YR 6/6	15 C		M	silty clay				
	centration, D=Depletion							n: PL=Pore Lining, M			
•	ndicators: (Applicable	to all LRRs,						or Problematic Hydr	ic Soils ³ :		
Histosol	· ,			elow Surface (S8				uck (A9) (LRR O)			
·	ipedon (A2)			urface (S9) <b>(LRF</b>		)	2 cm Muck (A10) (LRR S)				
Black His	( )			ky Mineral (F1) <b>(I</b>	.RR O)			d Vertic (F18) (outsid			
	n Sulfide (A4)			Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (LRR P, S,							
	Layers (A5)		Depleted Ma	( )				nomalous Bright Loamy Soils (F20)			
	Bodies (A6) (LRR P, T,		X Redox Dark Surface (F6) (MLRA 153B)								
	cky Mineral (A7) (LRR	P, T, U)	Depleted Dark Surface (F7) Red Parent Material (TF2)								
	esence (A8) (LRR U)						allow Dark Surface (1	. ,			
	ck (A9) <b>(LRR P, T)</b>		Marl (F10)	. ,			Other (E	xplain in Remarks)			
·	Below Dark Surface (A	A11)		chric (F11) (MLR/	•						
	rk Surface (A12)			nese Masses (F12	<i>,</i> .	O, P, T)		s of hydropphobic ve	•		
	airie Redox (A16) (ML		Umbric Surfa	ace (F13) <b>(LRR</b>	P, T, U)		wetlan	d hydrology must be	present.		
	ucky Mineral (S1) (LR	R O, S)		; (F17) <b>(MLRA 1</b>			unless disturbed or problematic.				
	leyed Matrix (S4)			rtic (F18) (MLR/							
Sandy R	edox (S5)		Piedmont Fl	oodplain Soils (F	19) <b>(MLI</b>	RA 149A	.)				
	Matrix (S6)		Anomalous	Bright Loamy Soi	s (F20)	(MLRA	149A, 153C, 153D	))			
Dark Sur	face (S7) (LRR P, S, T	τ, U)									
Restrictive L	ayer (if present):										
Type:											
Depth (ind	ches):						Hydric Soil Pres	sent? Yes X	( No		
Remarks:											

# Appendix V: USACE Approved Jurisdictional Determination Form

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

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

#### SECTION I: BACKGROUND INFORMATION

REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): Α.

#### B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Little Rock District

#### C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State:Arkansas County/parish/borough: Miller County City: Homan Township, Texarkana Center coordinates of site (lat/long in degree decimal format): Lat. 33.542119° N, Long. -93.877086° W. Universal Transverse Mercator: 14

Name of nearest waterbody: Red River

Name of nearest Traditional Navigable Water (TNW) Into which the aquatic resource flows: Red River

Name of watershed or Hydrologic Unit Code (HUC): Bois d'Arc Bayou (111402010202)

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

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

Office (Desk) Determination. Date:

Field Determination. Date(s):

#### SECTION II: SUMMARY OF FINDINGS A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

#### B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are and are not "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

#### 1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply): ¹
  - TNWs, including territorial seas
  - Wetlands adjacent to TNWs
  - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
  - Non-RPWs that flow directly or indirectly into TNWs
  - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
    - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
    - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
    - Impoundments of jurisdictional waters
    - Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: linear feet: width (ft) and/or acres. Wetlands: 1.29 acres.
- c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual Elevation of established OHWM (if known):
- Non-regulated waters/wetlands (check if applicable):³ 2.
  - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: Several isolated wetlands were observed on the Project.

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

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

³ Supporting documentation is presented in Section III.F.

#### SECTION III: CWA ANALYSIS

#### A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW:

Summarize rationale supporting determination:

#### 2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size:	Pick List	
Drainage area:	Pick List	
Average annual rainfa	ll: inches	
Average annual snowt	fall: inches	

#### (ii) Physical Characteristics:

(a) <u>Relationship with TNW:</u>

 ☐ Tributary flows directly into TNW.
 ☑ Tributary flows through 3 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.
Project waters are 7 (or less) river miles from RPW.
Project waters are 7 (or less) aerial (straight) miles from TNW.
Project waters are 7 (or less) aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵: Wetland 2 flows into a network of unnamed drainage ditches and canals that lead to the Red River.

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

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

Tributary stream order, if known:

(b)	General	Tributary	Characteristics (	check all	that apply):

.

(0)	Tributary is:       □ Natural         □ Artificial (man-made).       Explain: Manmade drainge and flood control ditches and canals.         □ Manipulated (man-altered).       Explain:
	Tributary properties with respect to top of bank (estimate): Average width: 3-20 feet Average depth: 1-2 feet Average side slopes: Vertical (1:1 or less).
	Primary tributary substrate composition (check all that apply):
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Eroding due to livestock disturbance. Presence of run/riffle/pool complexes. Explain: No. Tributary geometry: <b>Relatively straight</b> Tributary gradient (approximate average slope): 0-1 %
(c)	<u>Flow:</u> Tributary provides for: <b>Intermittent but not seasonal flow</b> Estimate average number of flow events in review area/year: <b>20 (or greater)</b> Describe flow regime: Wetland 2 (a clogged drainage ditch) flows after significant precipitation. Other information on duration and volume:
	Surface flow is: <b>Discrete and confined.</b> Characteristics:
	Subsurface flow: Unknown. Explain findings: Dye (or other) test performed: .
	Tributary has (check all that apply):       □         Bed and banks       □         OHWM ⁶ (check all indicators that apply):       □         Image: Clear, natural line impressed on the bank       Image: Clear, natural line impressed on the bank         Image: Clear, natural line impressed on the bank       Image: Clear, natural line impressed on the bank         Image: Clear, natural line impressed on the bank       Image: Clear, natural line impressed on the bank         Image: Clear, natural line impressed on the bank       Image: Clear, natural line impressed on the bank         Image: Clear, natural line impressed on the bank       Image: Clear, natural line impressed on the bank         Image: Clear, natural line impressed on the bank       Image: Clear, natural line impressed on the bank         Image: Clear, natural line impressed on the bank       Image: Clear, natural line impressed on the bank         Image: Clear, natural line impressed on the bank       Image: Clear, natural line impressed on the bank         Image: Clear, natural line impressed on the bank       Image: Clear, natural line impressed on the bank         Image: Clear, natural line impressed on the bank       Image: Clear, natural line impressed on the bank         Image: Clear, natural line impressed on the theorem       Image: Clear, natural line impressed on the theorem         Image: Clear, natural line impressed on theorem       Image: Clear, natural line impressed on theorem <t< th=""></t<>
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):          High Tide Line indicated by:       Mean High Water Mark indicated by:         oil or scum line along shore objects       survey to available datum;         fine shell or debris deposits (foreshore)       physical markings/characteristics         tidal gauges       other (list):
(iii) Che	mical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Water is turbid with fine particles and manure. Identify specific pollutants, if known:

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

#### (iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics: Dominated by early buttcup, dock, and sedges.
- Habitat for:

Federally Listed species. Explain findings:

Fish/spawn areas. Explain findings:

Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings:

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

#### (i) Physical Characteristics:

- (a) <u>General Wetland Characteristics:</u> Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:
- (b) <u>General Flow Relationship with Non-TNW</u>: Flow is: **Pick List**. Explain:

Surface flow is: Pick List Characteristics:

Subsurface flow: **Pick List**. Explain findings:

#### (c) <u>Wetland Adjacency Determination with Non-TNW:</u>

Directly abutting

□ Not directly abutting

- Discrete wetland hydrologic connection. Explain:
- Ecological connection. Explain:
- Separated by berm/barrier. Explain:

#### (d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW. Project waters are **Pick List** aerial (straight) miles from TNW. Flow is from: **Pick List.** Estimate approximate location of wetland as within the **Pick List** floodplain.

#### (ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: . Identify specific pollutants, if known:

## (iii) Biological Characteristics. Wetland supports (check all that apply):

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

#### 3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List** Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

#### C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

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

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

TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.

#### 2. <u>RPWs that flow directly or indirectly into TNWs.</u>

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
- Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

acres.

- Tributary waters: linear feet width (ft).
- Other non-wetland waters:
  - Identify type(s) of waters:
- 3. Non-RPWs⁸ that flow directly or indirectly into TNWs.
  - Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: 2,415 linear feet 3-20 width (ft). acres.
- Other non-wetland waters:
  - Identify type(s) of waters:
- Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. 4.
  - Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
    - Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: Clogged drainage ditch.
    - Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: 1.29 acres.

- Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs. 5.
  - Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. 6.
  - Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

- Impoundments of jurisdictional waters.9
  - As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
    - Demonstrate that impoundment was created from "waters of the U.S.," or
    - Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
    - Demonstrate that water is isolated with a nexus to commerce (see E below).
- E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):10
  - which are or could be used by interstate or foreign travelers for recreational or other purposes.
  - from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
  - which are or could be used for industrial purposes by industries in interstate commerce.
  - Interstate isolated waters. Explain:
  - Other factors. Explain:

#### Identify water body and summarize rationale supporting determination:

⁸See Footnote # 3.

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

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

Provide estimates for jurisdictional waters in the review area (check all that apply):

Tributary waters: linear feet width (ft).

Other non-wetland waters: acres.

Identify type(s) of waters:

Wetlands: acres.

#### F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based <u>solely</u> on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: **Delineated** wetlands are isolated from other features by berms and acres of pasture/forest.
- Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
   Lakes/ponds: 4.31 acres.
   Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: 1.64 acres.

#### SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:  $\overline{\boxtimes}$ Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS NHD data. USGS 8 and 12 digit HUC maps. U.S. Geological Survey map(s). Cite scale & quad name: Homan, AR and Fulton, AR. USDA Natural Resources Conservation Service Soil Survey. Citation: Miller County, Arkansas. National wetlands inventory map(s). Cite name: State/Local wetland inventory map(s): FEMA/FIRM maps:05091C0050D and 05091C0075D. 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: Aerial (Name & Date): or Other (Name & Date): Previous determination(s). File no. and date of response letter: Applicable/supporting case law: Applicable/supporting scientific literature: Other information (please specify):

#### **B. ADDITIONAL COMMENTS TO SUPPORT JD:**