C

Appendix C – Weather Conditions

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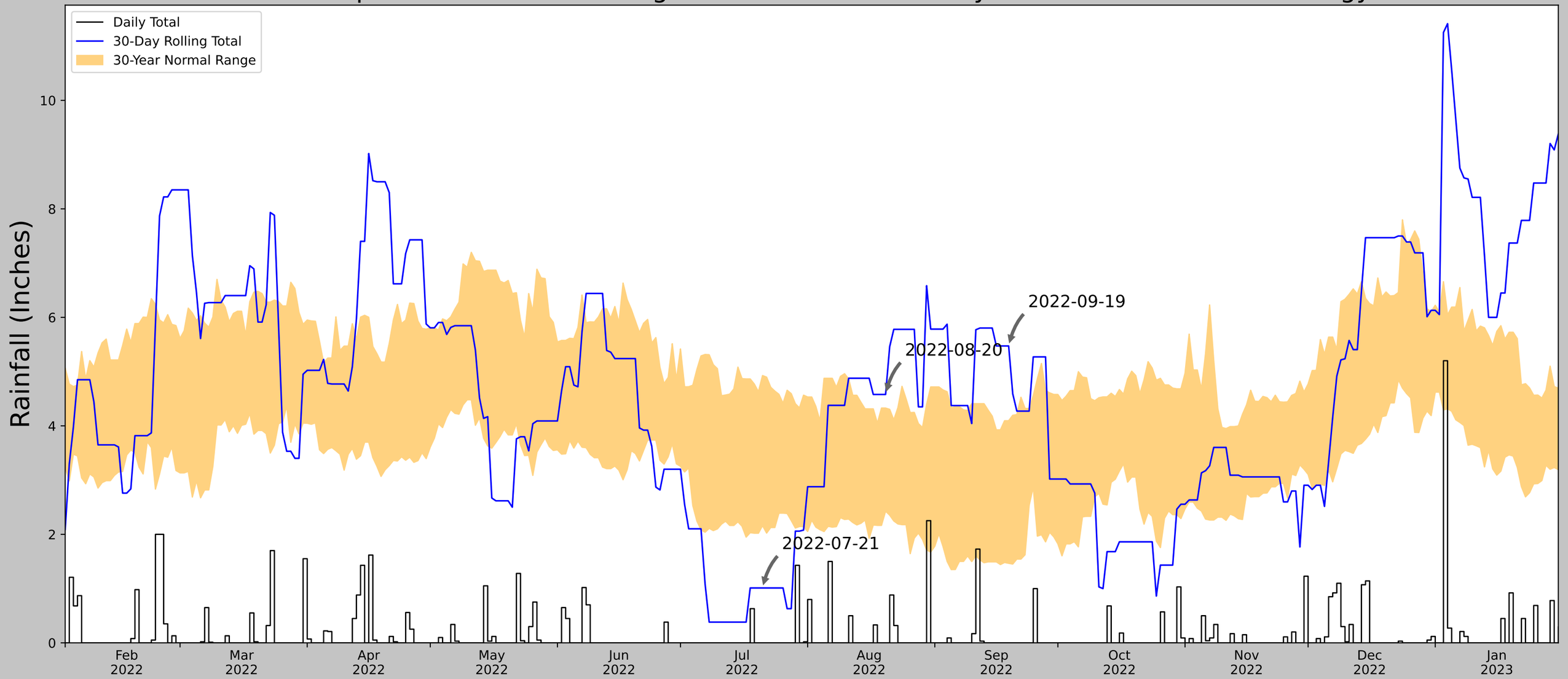
Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	35.723829, -89.517959
Observation Date	2022-09-19
Elevation (ft)	395.479
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

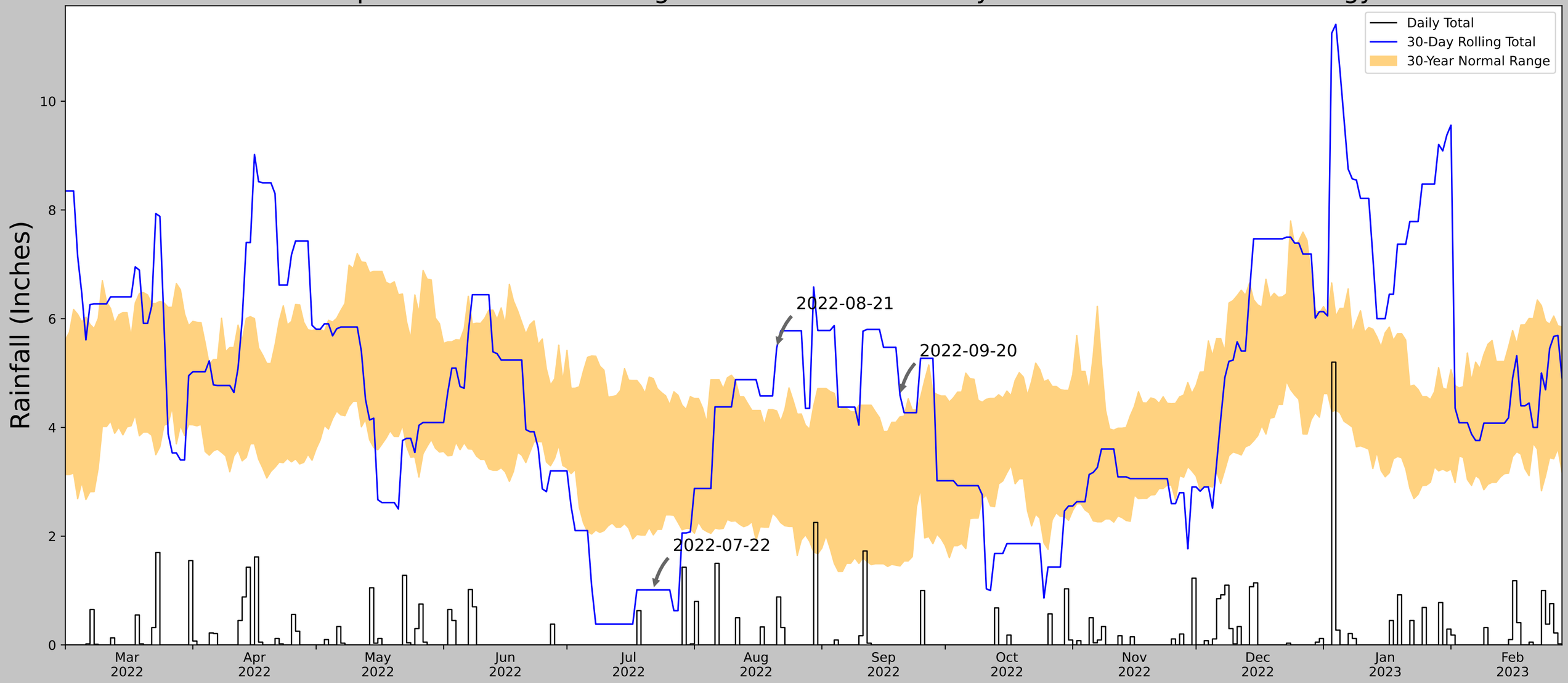
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-09-19	1.466142	4.094488	5.472441	Wet	3	3	9
2022-08-20	2.427165	4.327953	4.57874	Wet	3	2	6
2022-07-21	2.161024	4.927559	1.011811	Dry	1	1	1
Result							Wetter than Normal - 16

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
BROWNSVILLE	35.5894, -89.2586	330.053	17.271	65.426	8.902	11173	88
BROWNSVILLE 1.0 SE	35.5841, -89.2423	348.097	0.986	18.044	0.461	20	2
ALAMO 1 N	35.7978, -89.1175	330.053	16.432	0.0	7.394	95	0
SOMERVILLE 10N	35.3883, -89.3717	370.079	15.282	40.026	7.489	23	0
RIPLEY	35.7178, -89.4986	399.934	16.132	69.881	8.387	41	0
COVINGTON 3 SW	35.5497, -89.7	384.843	24.958	54.79	12.599	1	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	35.723829, -89.517959
Observation Date	2022-09-20
Elevation (ft)	395.479
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

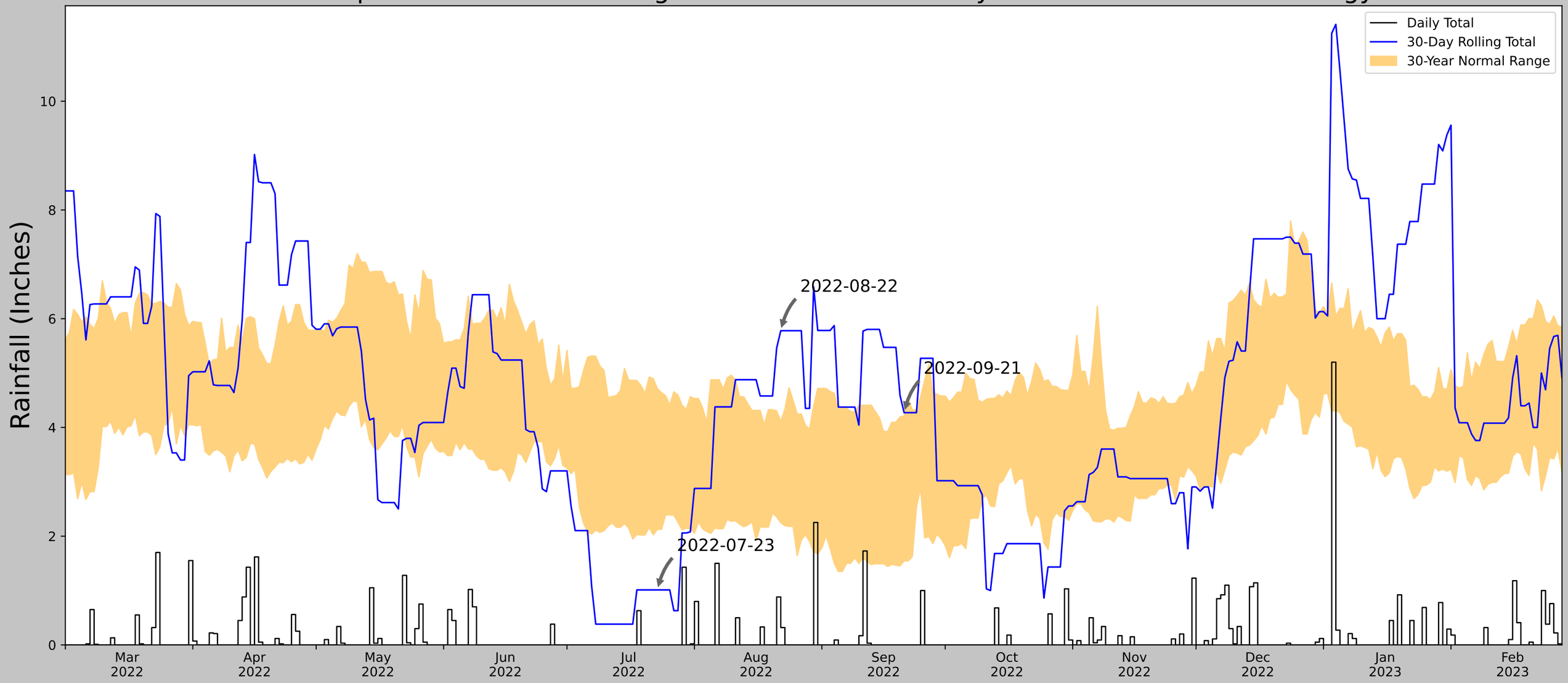
30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-09-20	1.452362	4.195669	4.590551	Wet	3	3	9
2022-08-21	2.353937	4.304331	5.46063	Wet	3	2	6
2022-07-22	2.023228	4.898032	1.011811	Dry	1	1	1
Result							Wetter than Normal - 16

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
BROWNSVILLE	35.5894, -89.2586	330.053	17.271	65.426	8.902	11173	88
BROWNSVILLE 1.0 SE	35.5841, -89.2423	348.097	0.986	18.044	0.461	20	2
ALAMO 1 N	35.7978, -89.1175	330.053	16.432	0.0	7.394	95	0
SOMERVILLE 10N	35.3883, -89.3717	370.079	15.282	40.026	7.489	23	0
RIPLEY	35.7178, -89.4986	399.934	16.132	69.881	8.387	41	0
COVINGTON 3 SW	35.5497, -89.7	384.843	24.958	54.79	12.599	1	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	35.723829, -89.517959
Observation Date	2022-09-21
Elevation (ft)	395.479
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

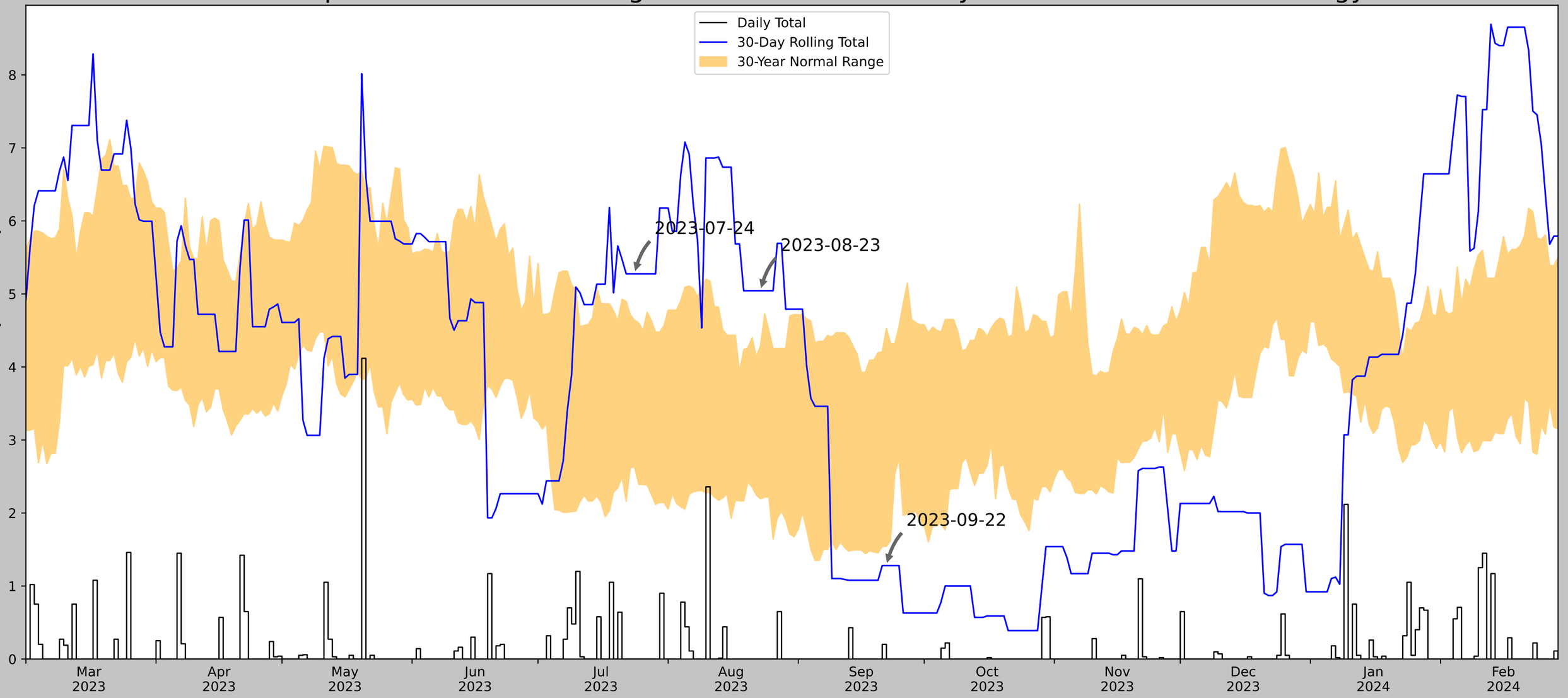
30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-09-21	1.544095	4.206693	4.271654	Wet	3	3	9
2022-08-22	2.247244	4.110236	5.779528	Wet	3	2	6
2022-07-23	2.126378	4.711811	1.011811	Dry	1	1	1
Result							Wetter than Normal - 16

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
BROWNSVILLE	35.5894, -89.2586	330.053	17.271	65.426	8.902	11173	88
BROWNSVILLE 1.0 SE	35.5841, -89.2423	348.097	0.986	18.044	0.461	20	2
ALAMO 1 N	35.7978, -89.1175	330.053	16.432	0.0	7.394	95	0
SOMERVILLE 10N	35.3883, -89.3717	370.079	15.282	40.026	7.489	23	0
RIPLEY	35.7178, -89.4986	399.934	16.132	69.881	8.387	41	0
COVINGTON 3 SW	35.5497, -89.7	384.843	24.958	54.79	12.599	1	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



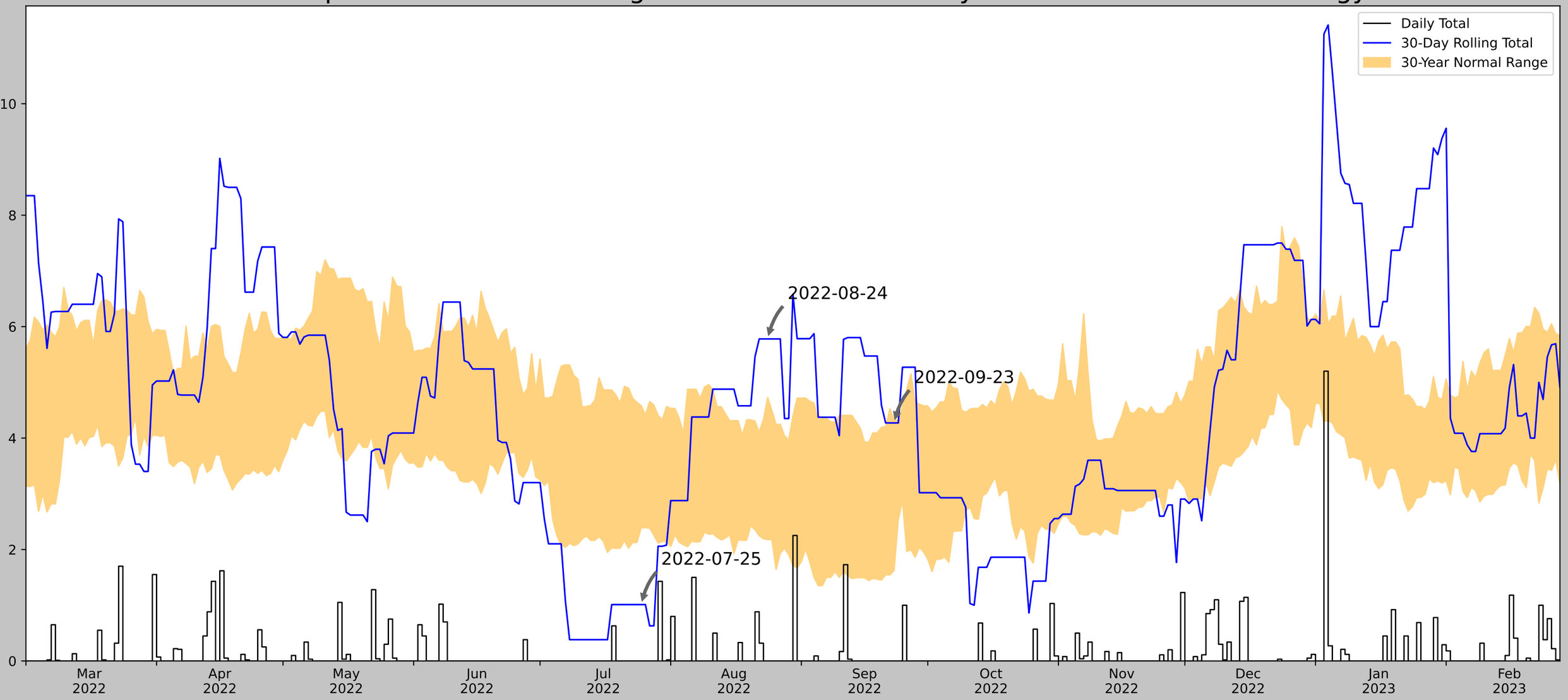
Coordinates	35.723829, -89.517959
Observation Date	2023-09-22
Elevation (ft)	395.479
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-09-22	1.544095	4.527953	1.279528	Dry	1	3	3
2023-08-23	2.192126	4.290945	5.043307	Wet	3	2	6
2023-07-24	2.626378	4.640945	5.275591	Wet	3	1	3
Result							Normal Conditions - 12

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
BROWNSVILLE	35.5894, -89.2586	330.053	17.271	65.426	8.902	11150	90
BROWNSVILLE 1.0 SE	35.5841, -89.2423	348.097	0.986	18.044	0.461	43	0
ALAMO 1 N	35.7978, -89.1175	330.053	16.432	0.0	7.394	95	0
SOMERVILLE 10N	35.3883, -89.3717	370.079	15.282	40.026	7.489	23	0
RIPLEY	35.7178, -89.4986	399.934	16.132	69.881	8.387	41	0
COVINGTON 3 SW	35.5497, -89.7	384.843	24.958	54.79	12.599	1	0



Coordinates	35.723829, -89.517959
Observation Date	2022-09-23
Elevation (ft)	395.479
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

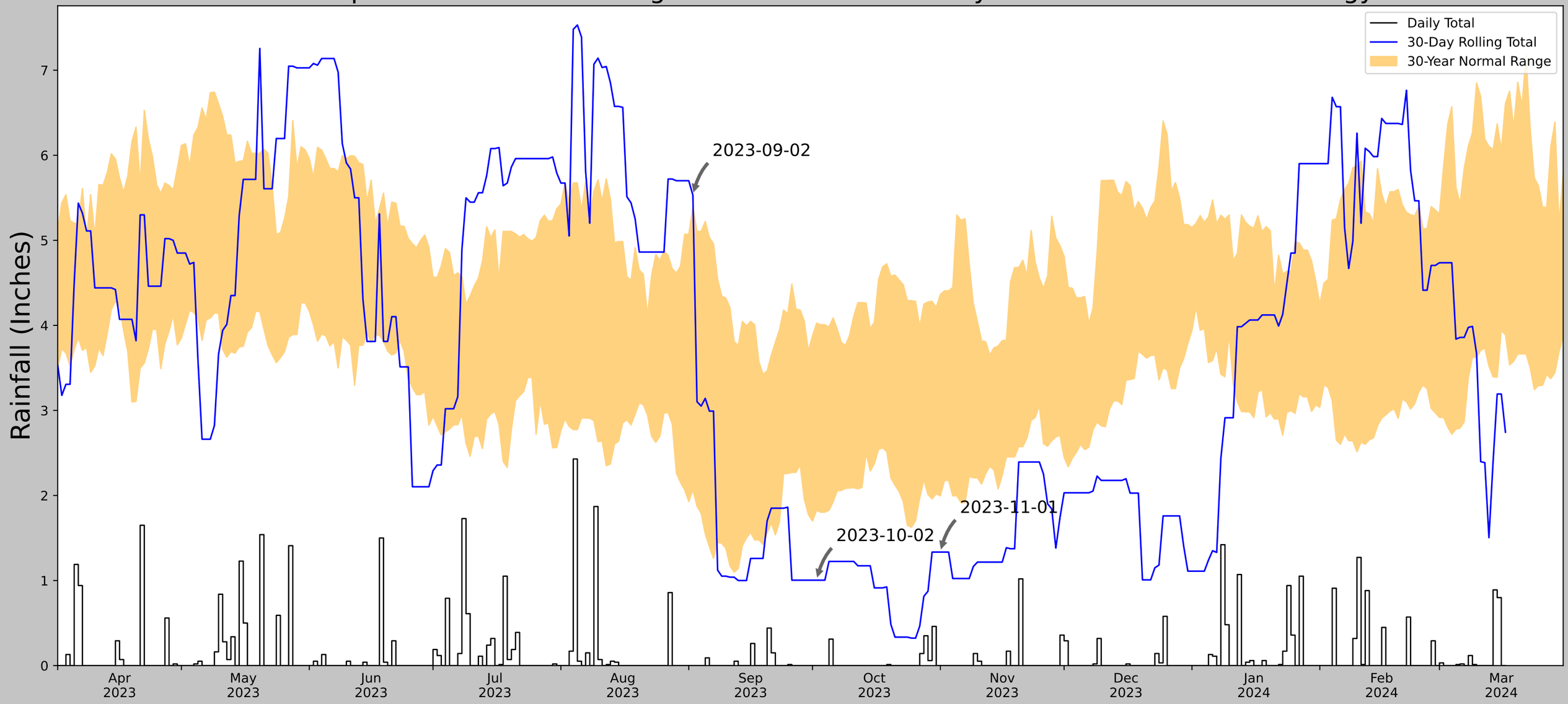
30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-09-23	1.623622	4.320866	4.271654	Normal	2	3	6
2022-08-24	2.178347	4.729134	5.779528	Wet	3	2	6
2022-07-25	2.390945	4.581496	1.011811	Dry	1	1	1
Result							Normal Conditions - 13

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
BROWNSVILLE	35.5894, -89.2586	330.053	17.271	65.426	8.902	11173	89
BROWNSVILLE 1.0 SE	35.5841, -89.2423	348.097	0.986	18.044	0.461	20	1
ALAMO 1 N	35.7978, -89.1175	330.053	16.432	0.0	7.394	95	0
SOMERVILLE 10N	35.3883, -89.3717	370.079	15.282	40.026	7.489	23	0
RIPLEY	35.7178, -89.4986	399.934	16.132	69.881	8.387	41	0
COVINGTON 3 SW	35.5497, -89.7	384.843	24.958	54.79	12.599	1	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	35.723829, -89.517959
Observation Date	2023-11-01
Elevation (ft)	395.479
Drought Index (PDSI)	Mild drought
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-11-01	1.994488	4.364173	1.334646	Dry	1	3	3
2023-10-02	1.825197	4.025591	1.003937	Dry	1	2	2
2023-09-02	2.066142	5.389764	5.531496	Wet	3	1	3
Result							Drier than Normal - 8

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
JACKSON MCKELLAR- SIPES AP	35.5933, -88.9169	423.885	34.927	28.406	16.709	11047	90
JACKSON EXP STN	35.6214, -88.8456	399.934	4.451	23.951	2.11	305	0

D

Appendix D – Site Photographs

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Photo 1. W001-W, PEM, facing west.

Photo 2. W001-UPL, facing east.

Photo 3. W002-W, PEM, facing south.

Photo 4. W002-UPL, facing northeast.

Photo 5. W003-W, PEM, facing west.

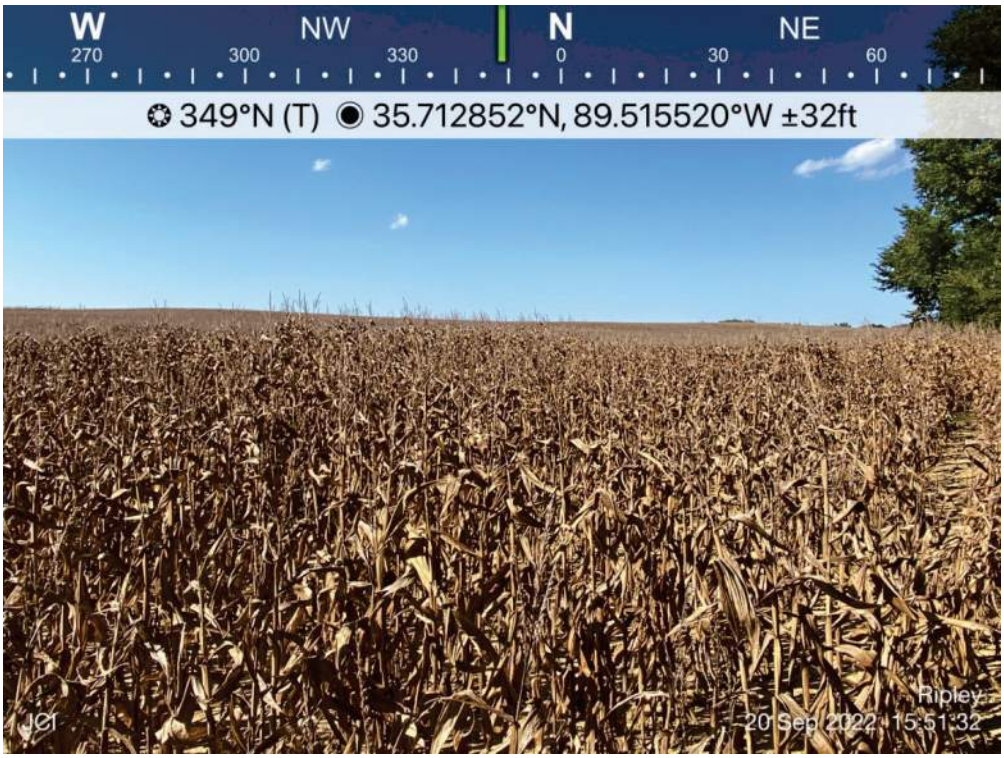

Photo 6. W003-UPL, facing north.

Photo 7. W004-W, PFO, facing east.

Photo 8. W004-UPL, facing southeast.

Photo 9. W005-W, PFO, facing southwest.

Photo 10. W005-UPL, facing northwest.

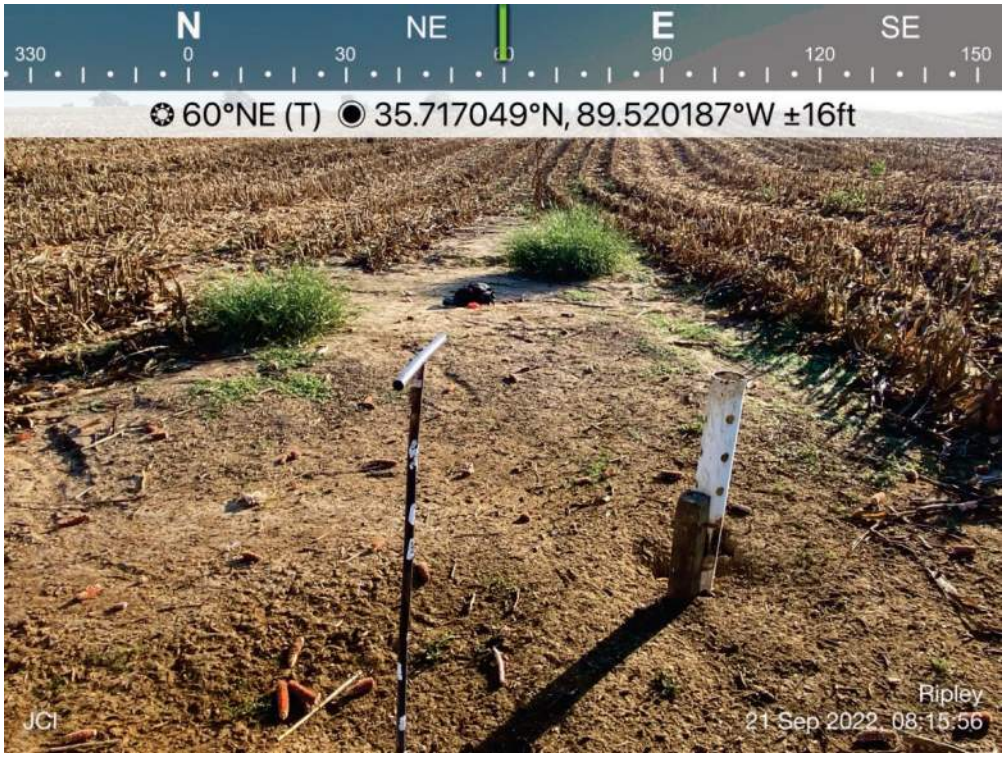

Photo 11. W006-W, PEM, facing northeast.

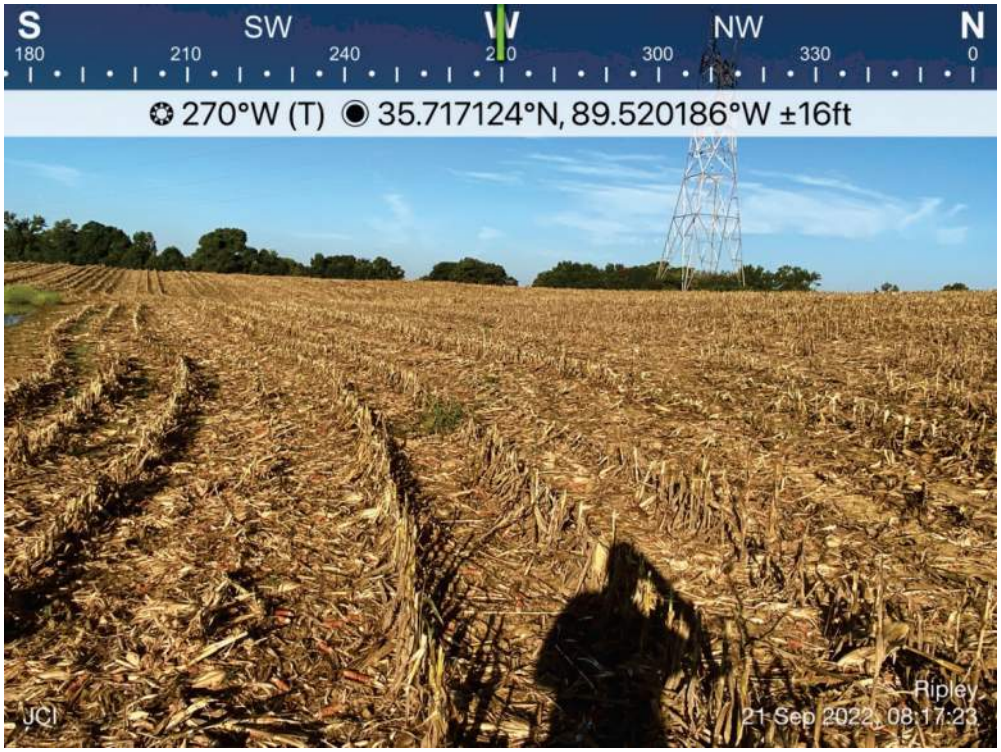

Photo 12. W006-UPL, facing west.

Photo 13. W007-W, PFO, facing southwest.

Photo 14. W007-UPL, facing west.

Photo 15. W008-W, PFO, facing west.

Photo 16. W008-UPL, facing north.

Photo 17. W009-W, PSS, facing southwest.

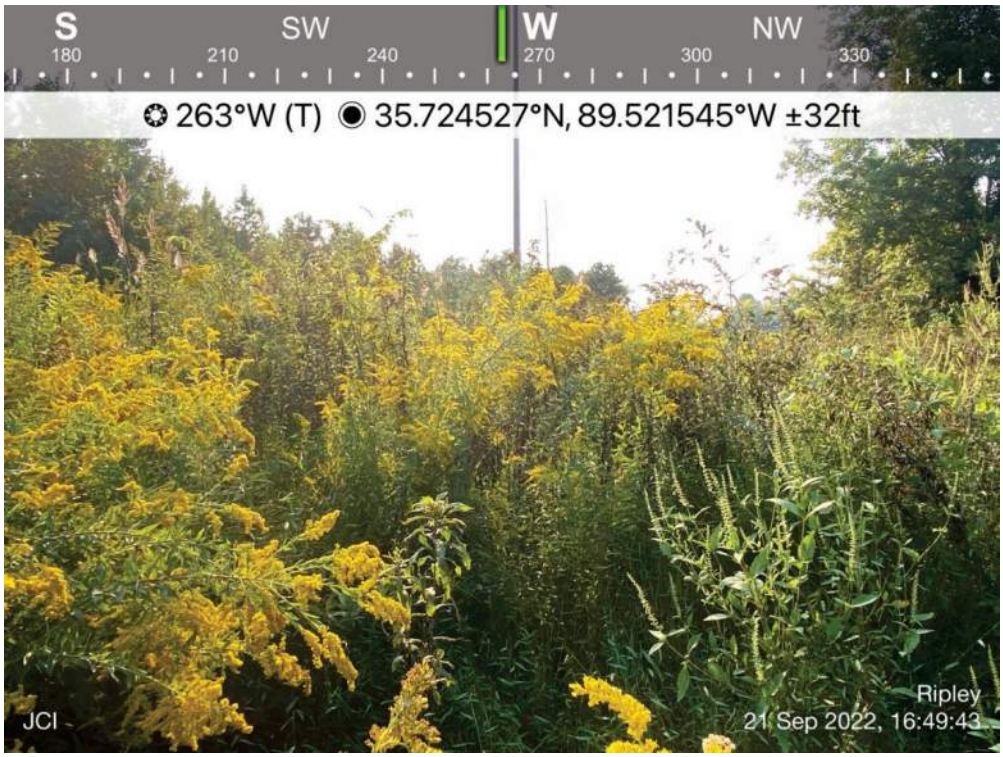

Photo 18. W009-UPL, facing west.

Photo 19. W010-W, PEM, facing south.

Photo 20. W010-UPL, facing northeast.

Photo 21. W011-W, PEM, facing southeast.

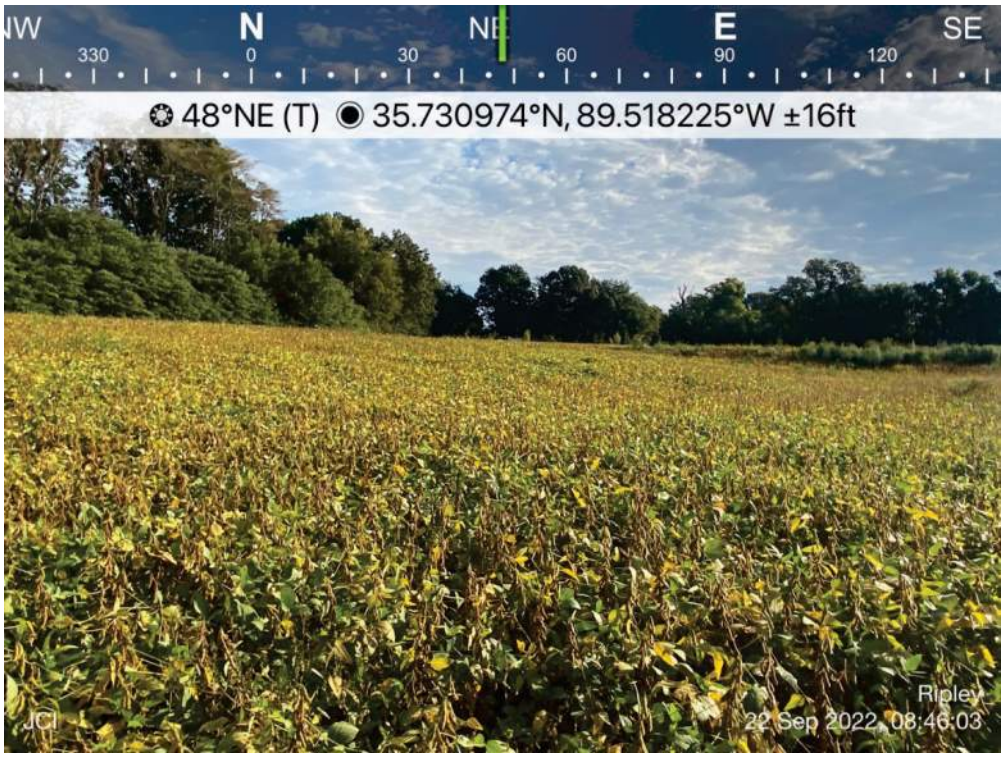

Photo 22. W011-UPL, PEM, facing northeast.

Photo 23. W012-W, PEM, facing northeast.

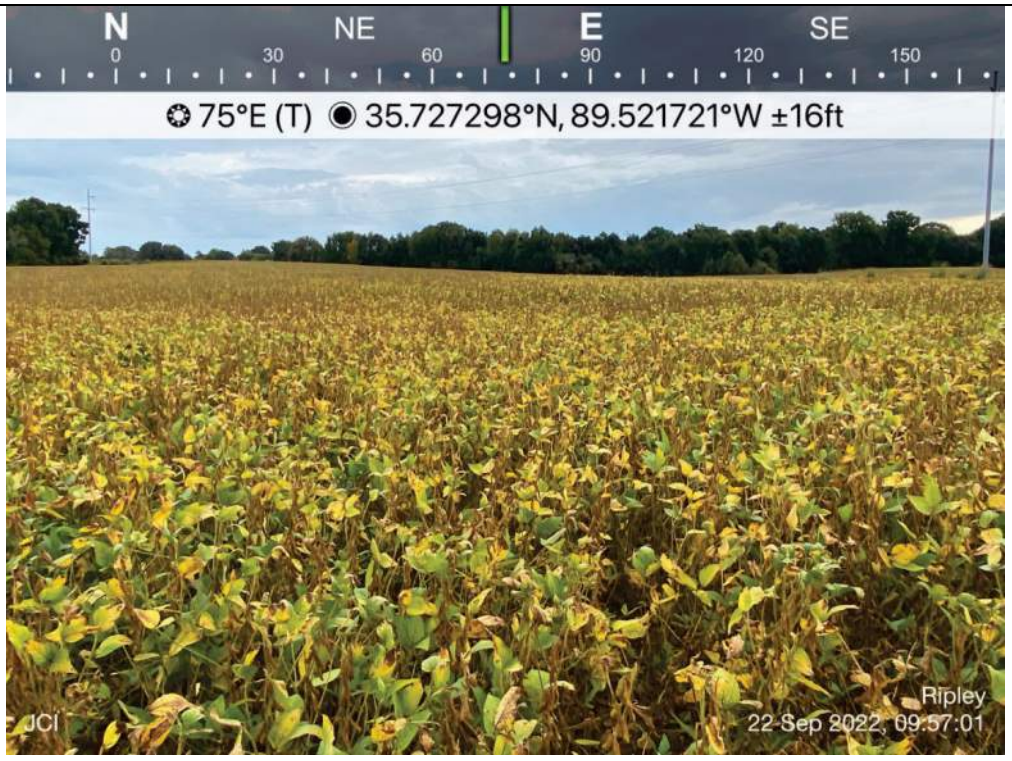

Photo 24. W012-UPL, PEM, facing northeast.

Photo 25- P001, facing northeast

Photo 26- S001, facing east

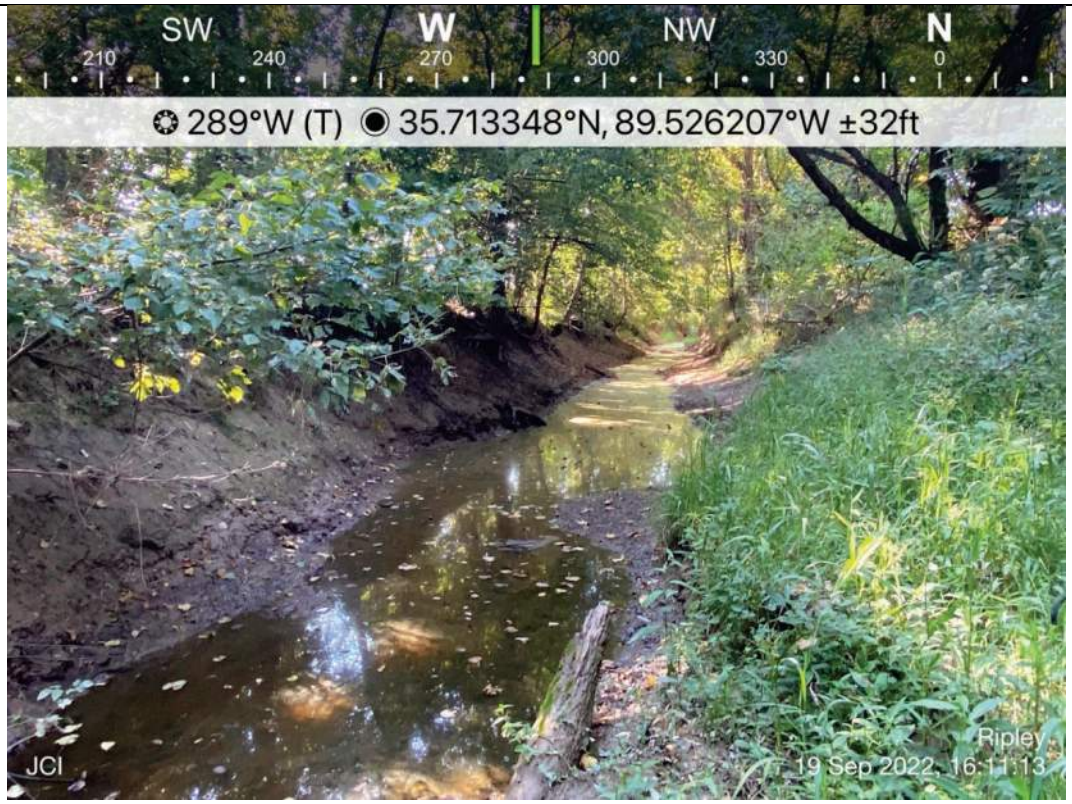

Photo 27- S001, facing west

Photo 28- S002, facing northeast

Photo 29- S002, facing southwest

Photo 30- S003, facing northeast

Photo 31- S003, facing southwest

Photo 32- S004, facing west

Photo 33- S004, facing east

Photo 34- S005, facing east

Photo 35- S005, facing west

Photo 36- S006, facing southeast, culvert off property

Photo 37- S006, facing southwest

Photo 38- S007, facing northeast, downstream

Photo 39- S007, facing west, upstream

Photo 40- S008, facing upstream

Photo 41- S008, facing downstream

Photo 42- S009, facing northeast, upstream

Photo 43- S009, facing southwest, downstream

Photo 44- S010, pipe leading from Pond 1 to stream, upstream

Photo 45- S010, facing southwest, downstream

Photo 46- S011, facing southeast, upstream

Photo 47- S011, facing northwest, downstream

Photo 48- S012, facing southeast, downstream

Photo 49- S012, facing northwest, upstream

Photo 50- S013, facing north, upstream

Photo 51- S013, facing west, downstream

Photo 52- S014, facing west, downstream

Photo 53- S014, facing east, upstream

Photo 54- S015, facing north, upstream

Photo 55- S015, facing southwest, downstream

Photo 56- S016, facing east, upstream

Photo 57- S016, facing west, downstream

Photo 58- S017, facing south, upstream

Photo 59- S017, facing east, downstream

Photo 60- S018, facing north, upstream

Photo 61- S018, facing southeast, downstream

Photo 62- E001, facing east, upstream

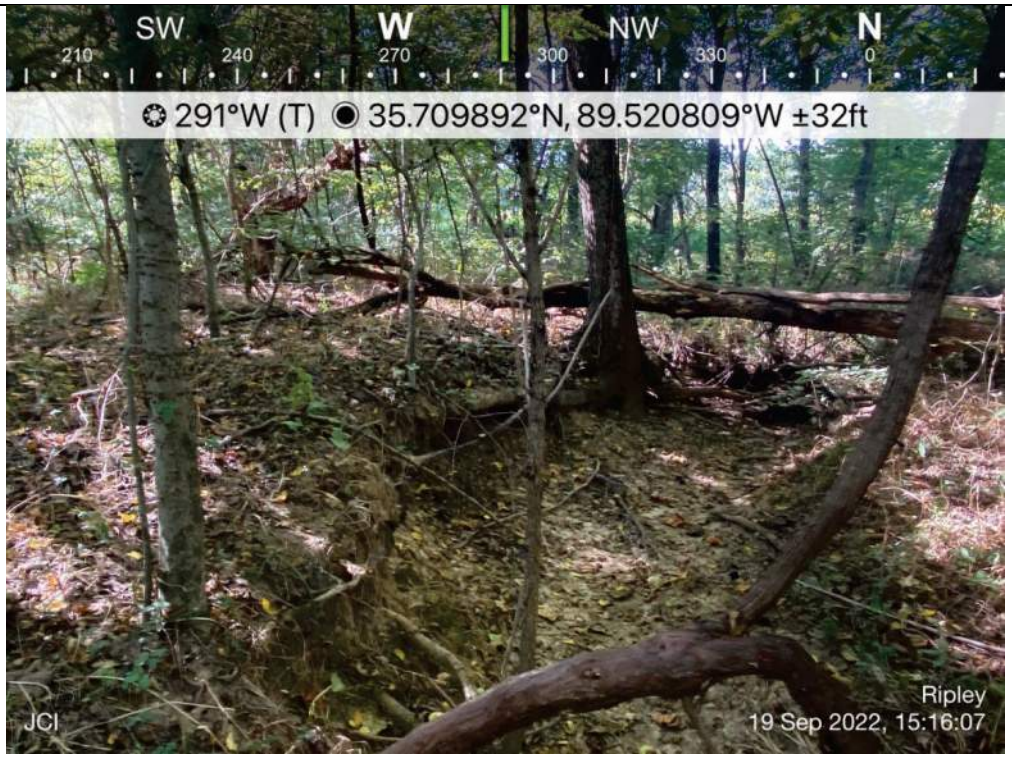

Photo 63- E001, facing west, downstream

Photo 64- E002, facing southwest, downstream

Photo 65- E002, facing north, upstream

Photo 66- E003, facing northwest, downstream

Photo 67- E004, facing north, upstream

Photo 68- E004, facing southwest, downstream

Photo 69- E005, facing north, upstream

Photo 70- E005, facing southeast, downstream

Photo 71- E006, facing north, upstream

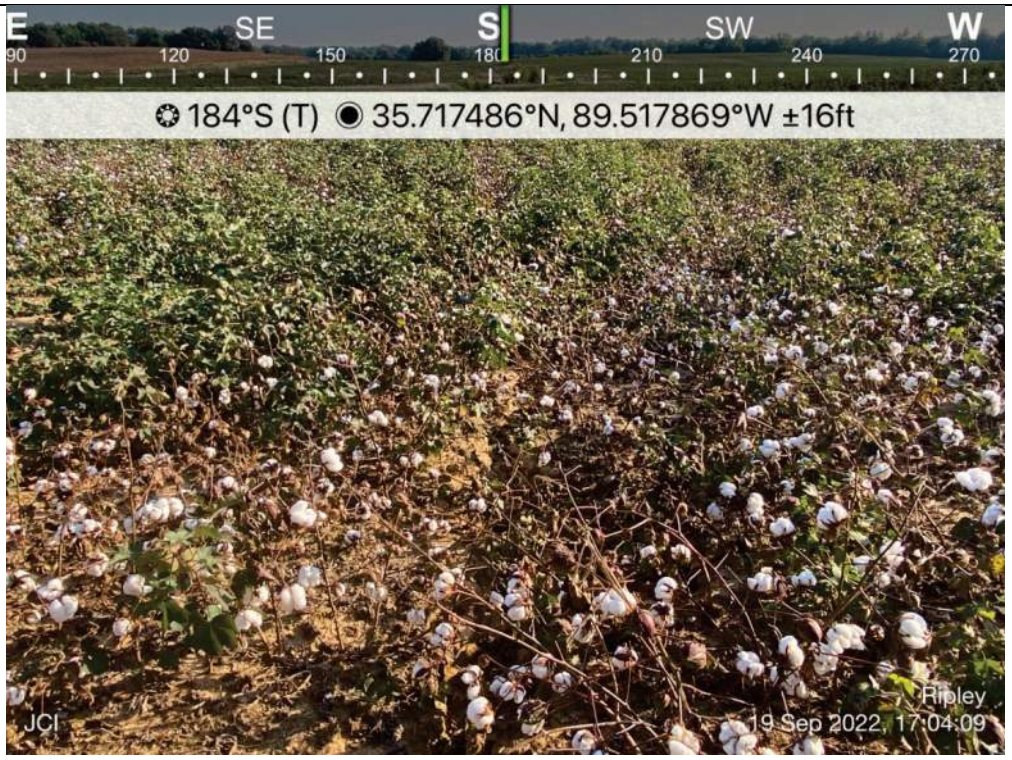

Photo 72- E006, facing south, downstream

Photo 73- E007, facing south, upstream

Photo 74- E007, facing west, downstream

Photo 75- E008, facing northeast, upstream

Photo 76- E008, facing west, downstream

Photo 77- E009, facing north, upstream

Photo 78- E009, facing east, downstream

Photo 79- E010, facing west, downstream

Photo 80- E011, facing northeast, downstream

Photo 81- E011, facing south, upstream

Photo 82- E012, facing southwest, upstream

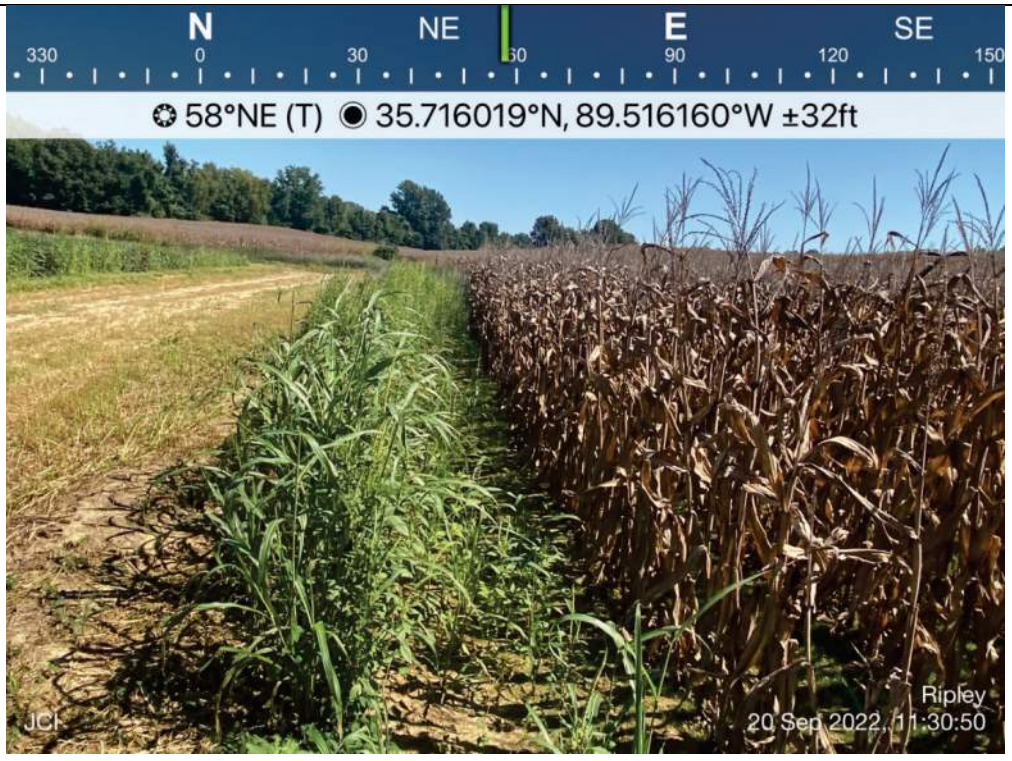

Photo 83- E012, facing northeast, downstream

Photo 84- E013, facing east, upstream

Photo 85- E013, facing west, downstream

Photo 86- E014, facing northeast, upstream

Photo 87- E014, facing west, downstream

Photo 88- E015, facing northeast, upstream

Photo 89- E015, facing west, downstream

Photo 90- E016, facing east, upstream

Photo 91- E016, facing south, downstream

Photo 92- E017, facing northwest, upstream

Photo 93- E017, facing southeast, downstream

Photo 94- E018, facing north, upstream

Photo 95- E018, facing south, downstream

Photo 96- E019, facing north, upstream

Photo 97- E019, facing southeast, downstream

Photo 98- E020, facing northwest, upstream

Photo 99- E020, facing south, downstream

Photo 100- E021, facing east, upstream

Photo 101- E021, facing west, downstream

Photo 102- E022, facing south, upstream

Photo 103- E022, facing north, downstream

Photo 104- E023, facing southeast, upstream

Photo 105- E023, facing northwest, downstream

Photo 106- E024, facing northeast, upstream

Photo 107- E024, facing southwest, downstream

Photo 108- E025, facing northeast, upstream

Photo 109- E025, facing southwest, downstream

Photo 110- E026, facing south, upstream

Photo 111- E026, facing north, downstream

Photo 112- E027, facing southeast, upstream

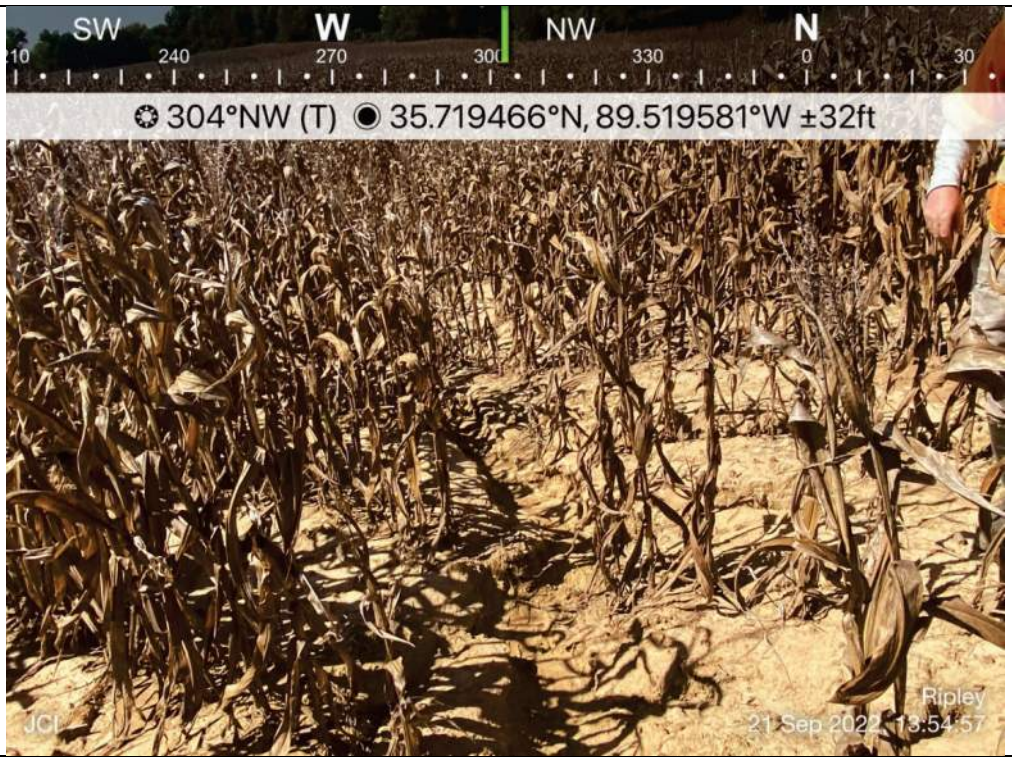

Photo 113- E027, facing northwest, downstream

Photo 114- E028, facing northwest, upstream

Photo 115- E028, facing southeast, downstream

Photo 116- E029, facing northwest, upstream

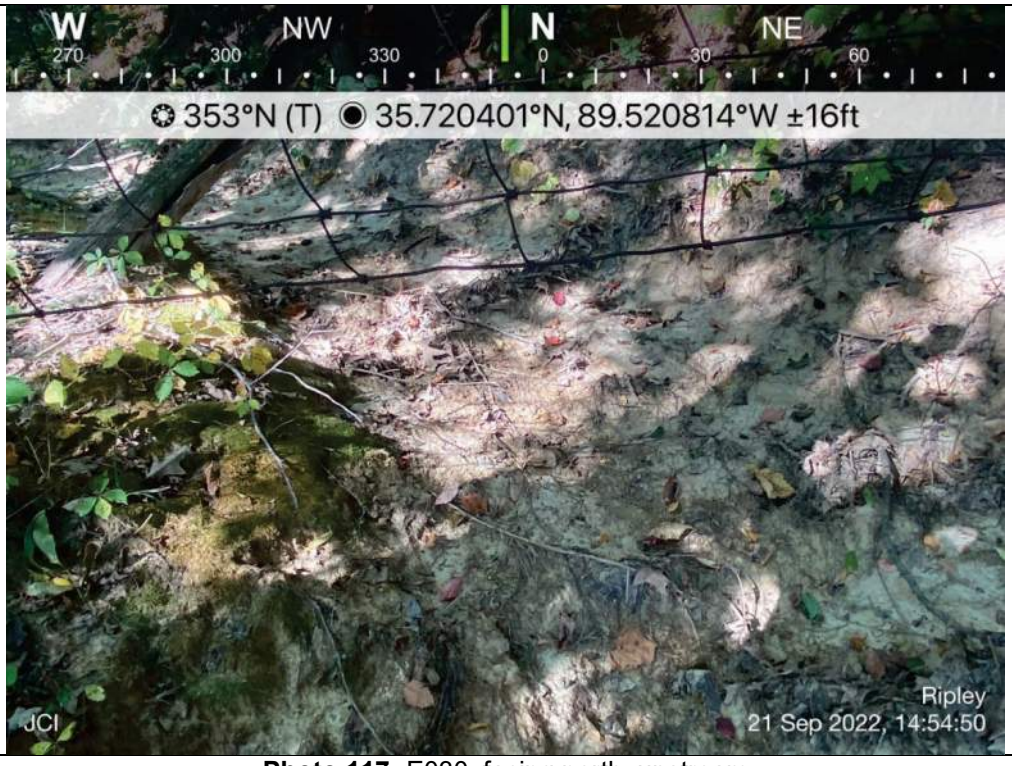

Photo 117- E030, facing north, upstream

Photo 118- E030, facing south, downstream

Photo 119- E031, facing west, downstream

Photo 120- E032, facing southeast, upstream

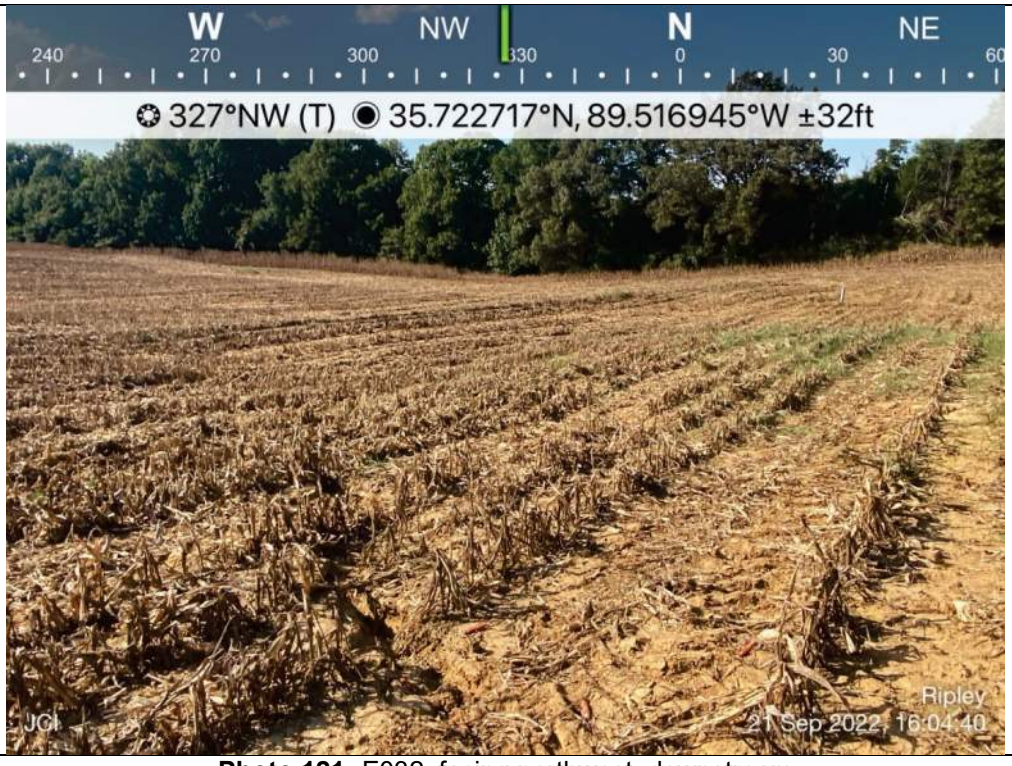

Photo 121- E032, facing northwest, downstream

Photo 122- E033, facing southwest, upstream

Photo 123- E033, facing north, downstream

Photo 124- E034, facing southeast, upstream

Photo 125- E034, facing northwest, downstream

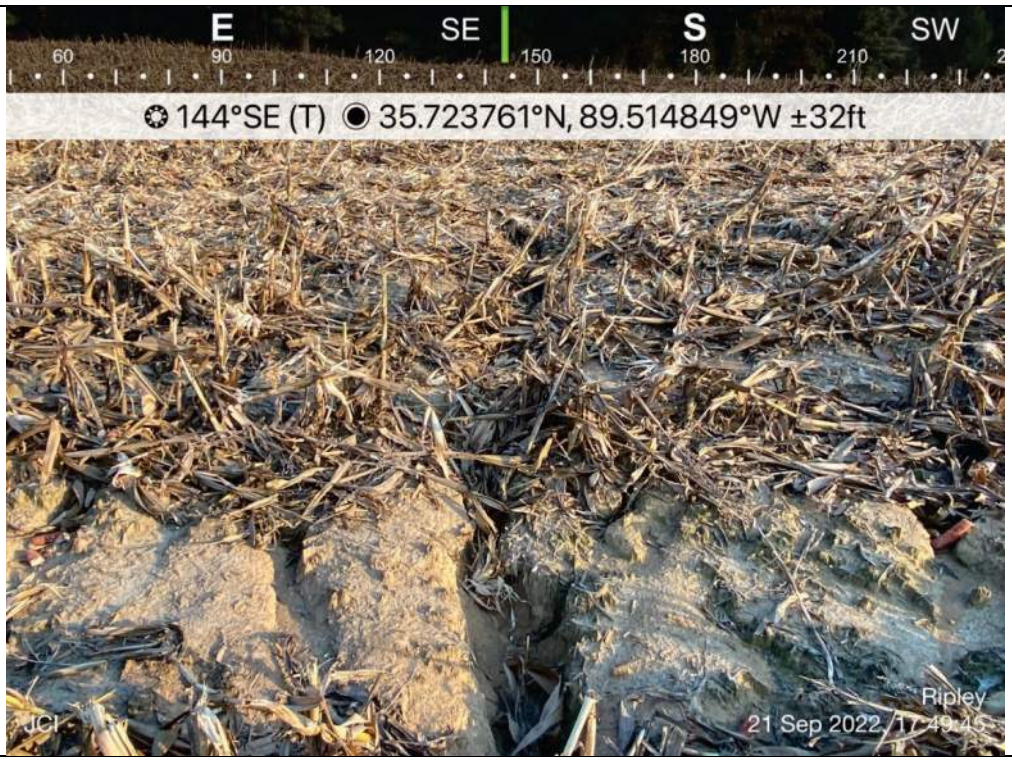

Photo 126- E035, facing southeast, upstream

Photo 127- E035, facing northwest, downstream

Photo 128- E036, facing southeast, upstream

Photo 129- E036, facing north, downstream

Photo 130- E037, facing northeast, upstream

Photo 131- E037, facing south, downstream

Photo 132- E038, facing southeast, upstream

Photo 133- E038, facing northwest, downstream

Photo 134- E039, facing east, upstream

Photo 135- E039, facing southwest, downstream

Photo 136- E040, facing northeast, upstream

Photo 137- E041, facing northeast, upstream

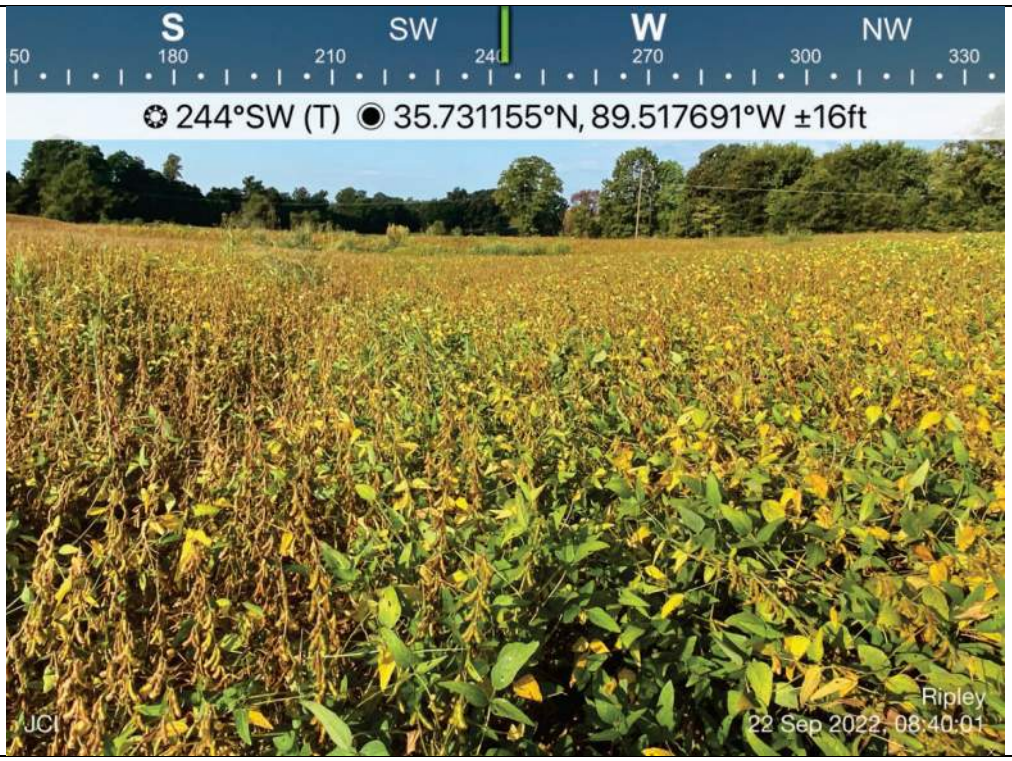

Photo 138- E041, facing southwest, downstream

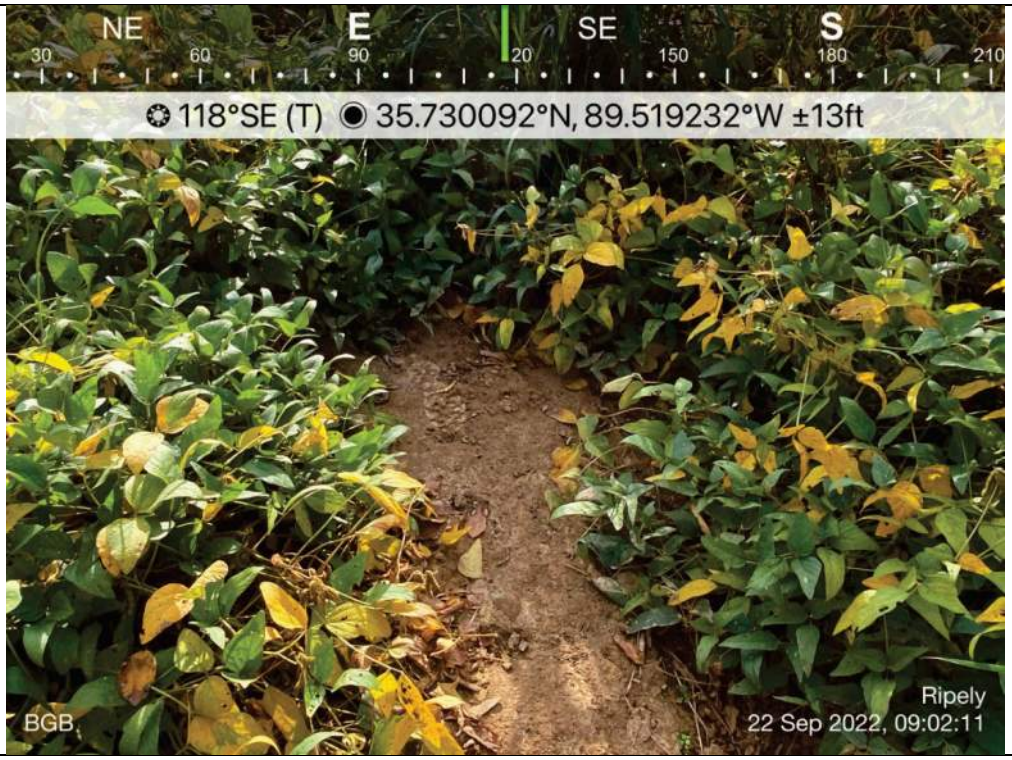

Photo 139- E042, facing southeast, upstream

Photo 140- E042, facing west, downstream

Photo 141- E043, facing south, upstream

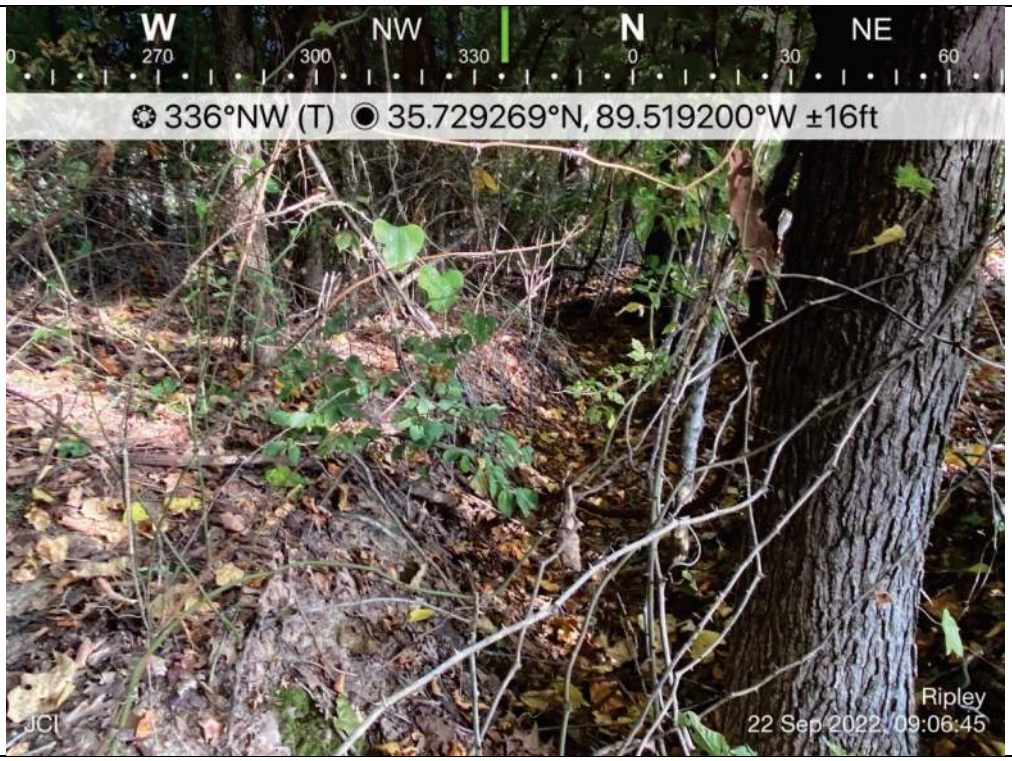

Photo 142- E043, facing northwest, downstream

Photo 143- E044, facing southwest, upstream

Photo 144- E044, facing northeast, downstream

Photo 145- E045, facing west, upstream

Photo 146- E045, facing east, downstream

Photo 147- E046, facing north, upstream

Photo 148- E046, facing southwest, downstream

Photo 149- E047, facing northwest, upstream

Photo 150- E047, facing southeast, downstream

Photo 151- E048, facing south, upstream

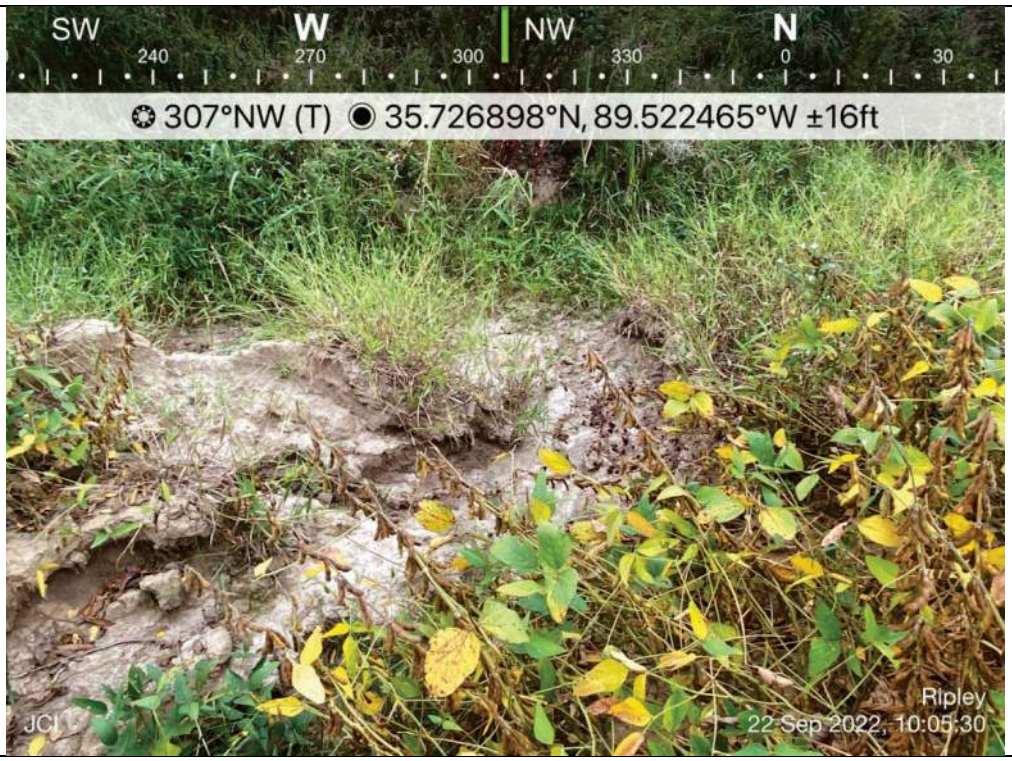

Photo 152- E048, facing northwest, downstream

Photo 153- E049, facing southeast, upstream

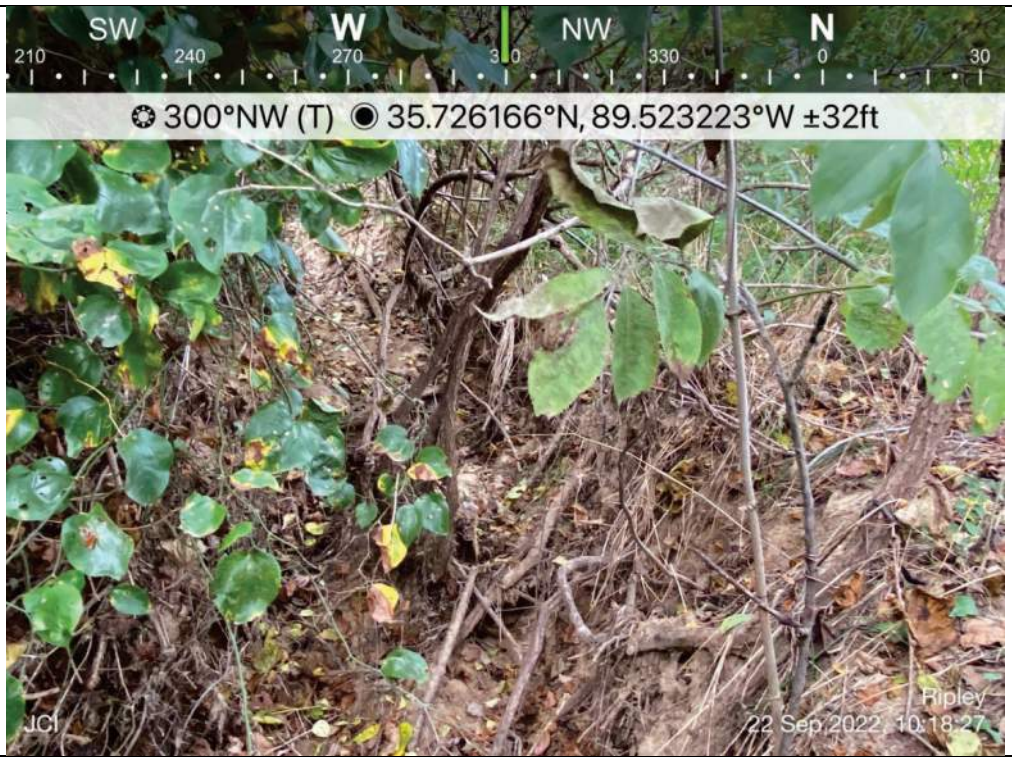

Photo 154- E049, facing northwest, downstream

Photo 155- E050, facing west, upstream

Photo 156- E050, facing east, downstream

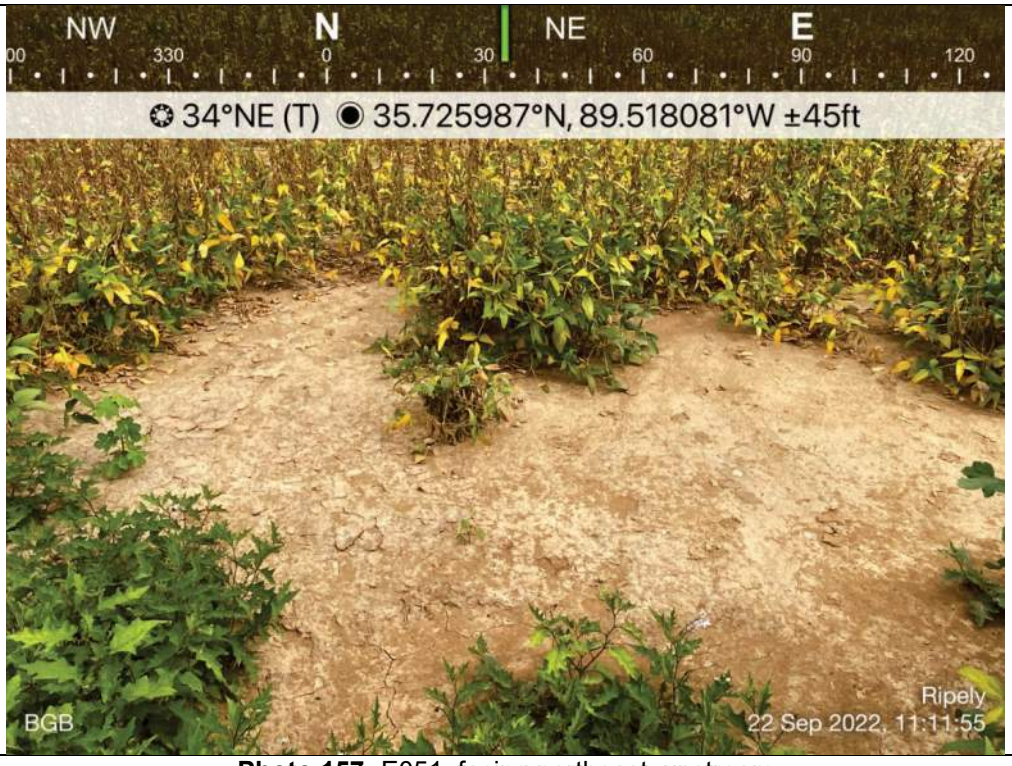

Photo 157- E051, facing northeast, upstream

Photo 158- E051, facing south, downstream

Photo 159- E052, facing northeast, upstream

Photo 160- E052, facing west, downstream

Photo 161- E053, facing north, upstream

Photo 162- E053, facing south, downstream

Photo 163- E054, facing north, upstream

Photo 164- E054, facing southwest, downstream

Photo 165- E055, facing northwest, upstream

Photo 166- E055, facing southeast, downstream

Photo 167- E056, facing north, upstream

Photo 168- E056, facing south, downstream

Photo 169- E057, facing north, upstream

Photo 170- E057, facing south, downstream

Photo 171- E058, facing north, upstream

Photo 172- E058, facing southwest, downstream

Photo 173- E059, facing southeast, upstream

Photo 174- E059, facing west, downstream

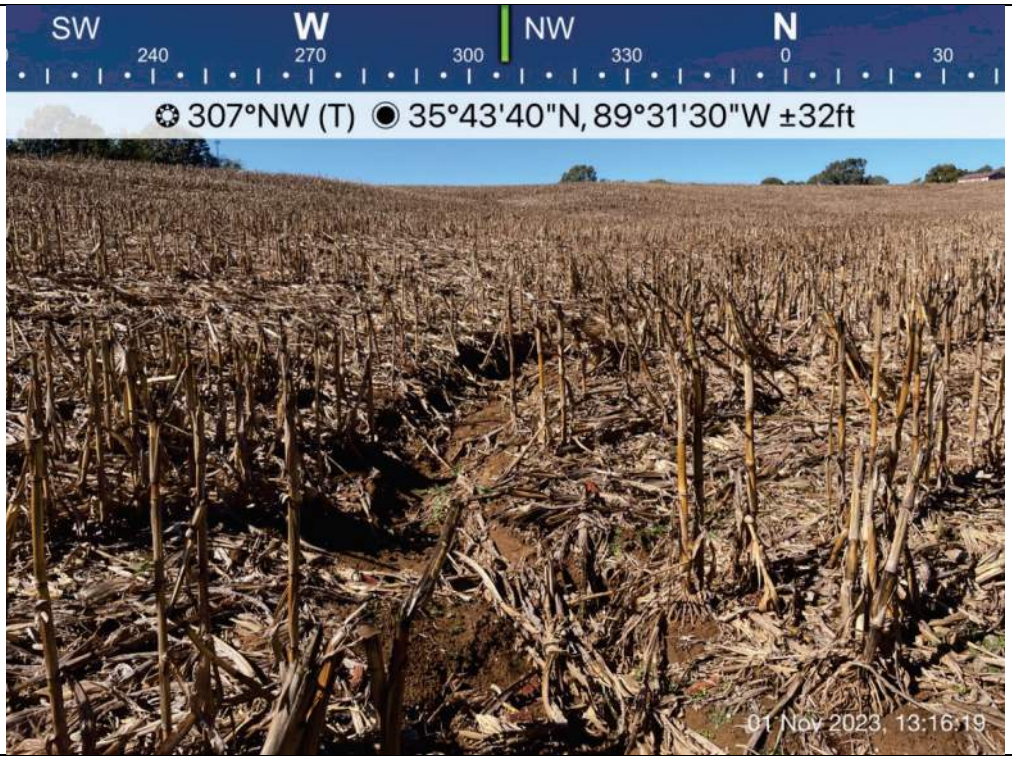

Photo 175- E060, facing northwest, upstream

Photo 176- E060, facing southeast, downstream

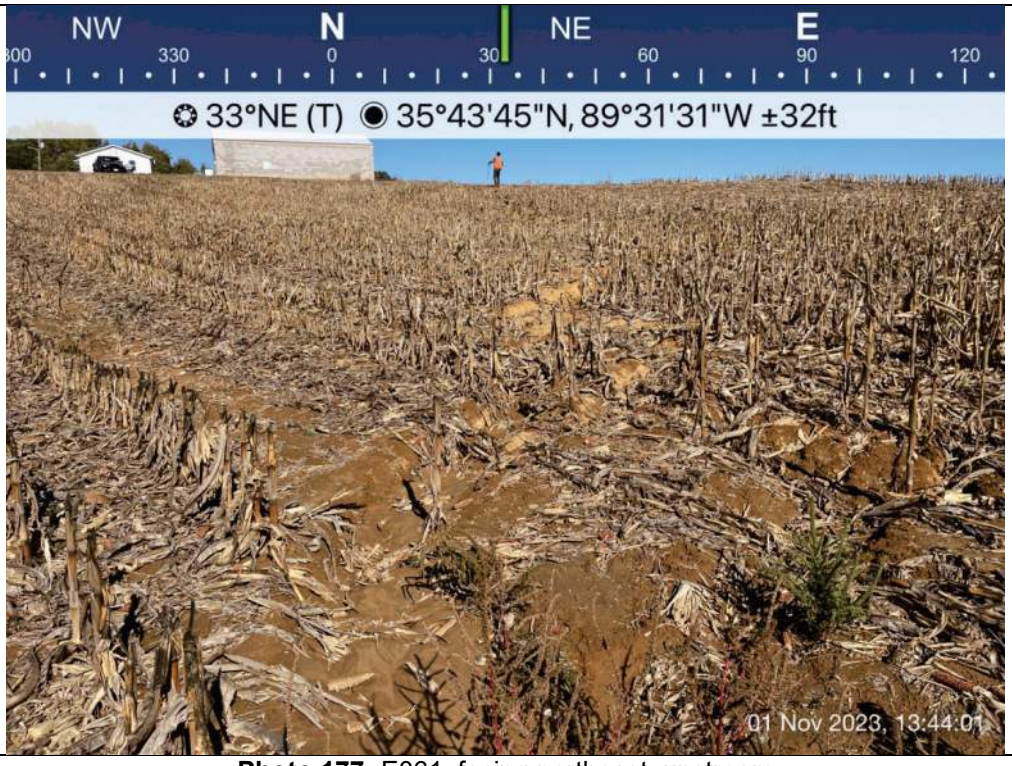

Photo 177- E061, facing northeast, upstream

Photo 178- E061, facing southwest, downstream

Photo 179- E062, facing west, upstream

Photo 180- E062, facing east, downstream

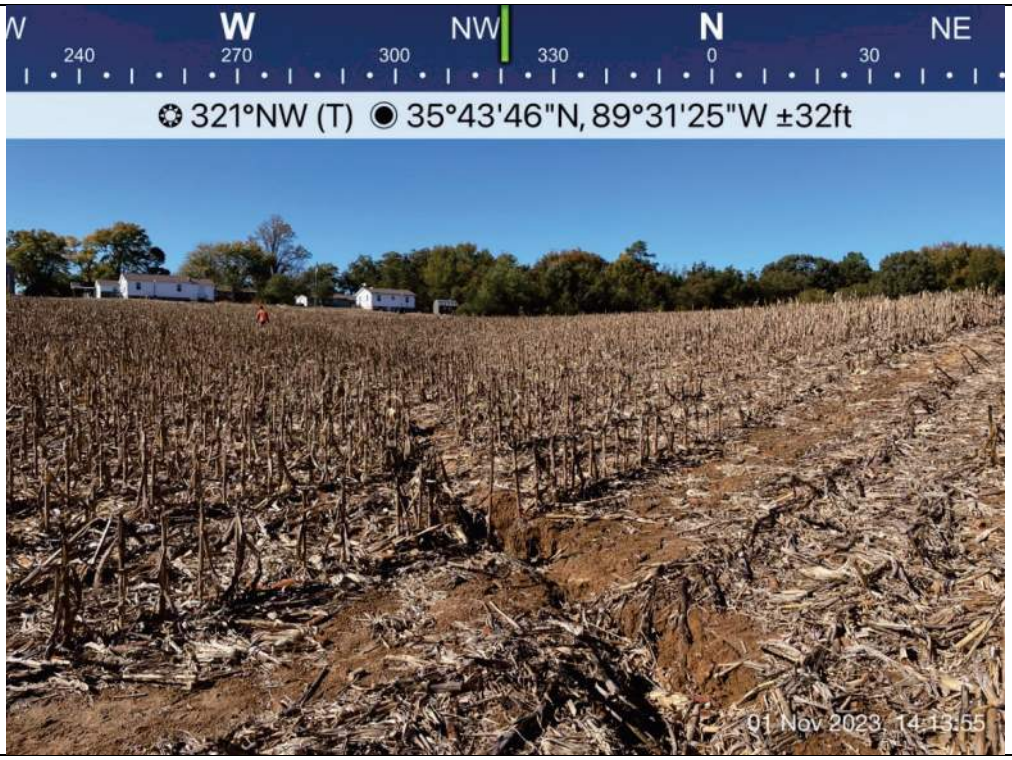

Photo 181- E063, facing northwest, upstream

Photo 182- E063, facing east, downstream

Photo 183- E064, facing north, upstream

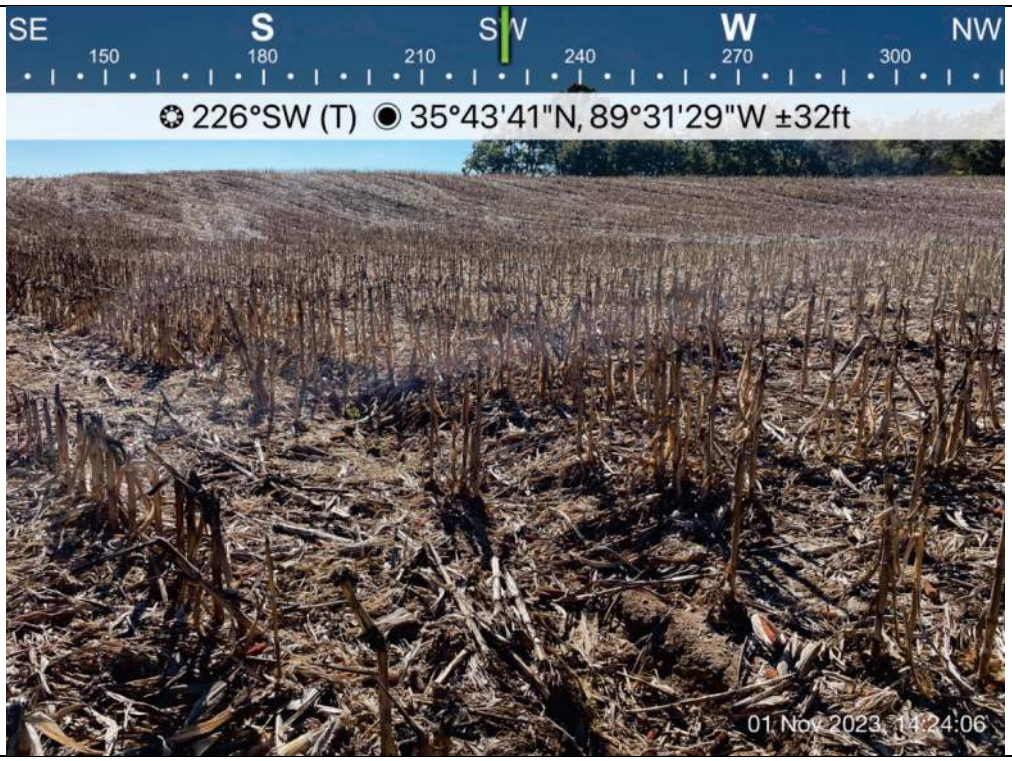

Photo 184- E064, facing southwest, downstream

Photo 185- E065, facing south, upstream

Photo 186- E065, facing west, downstream

E

Appendix E – USDA NRCS Soil Report

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United States Department of Agriculture

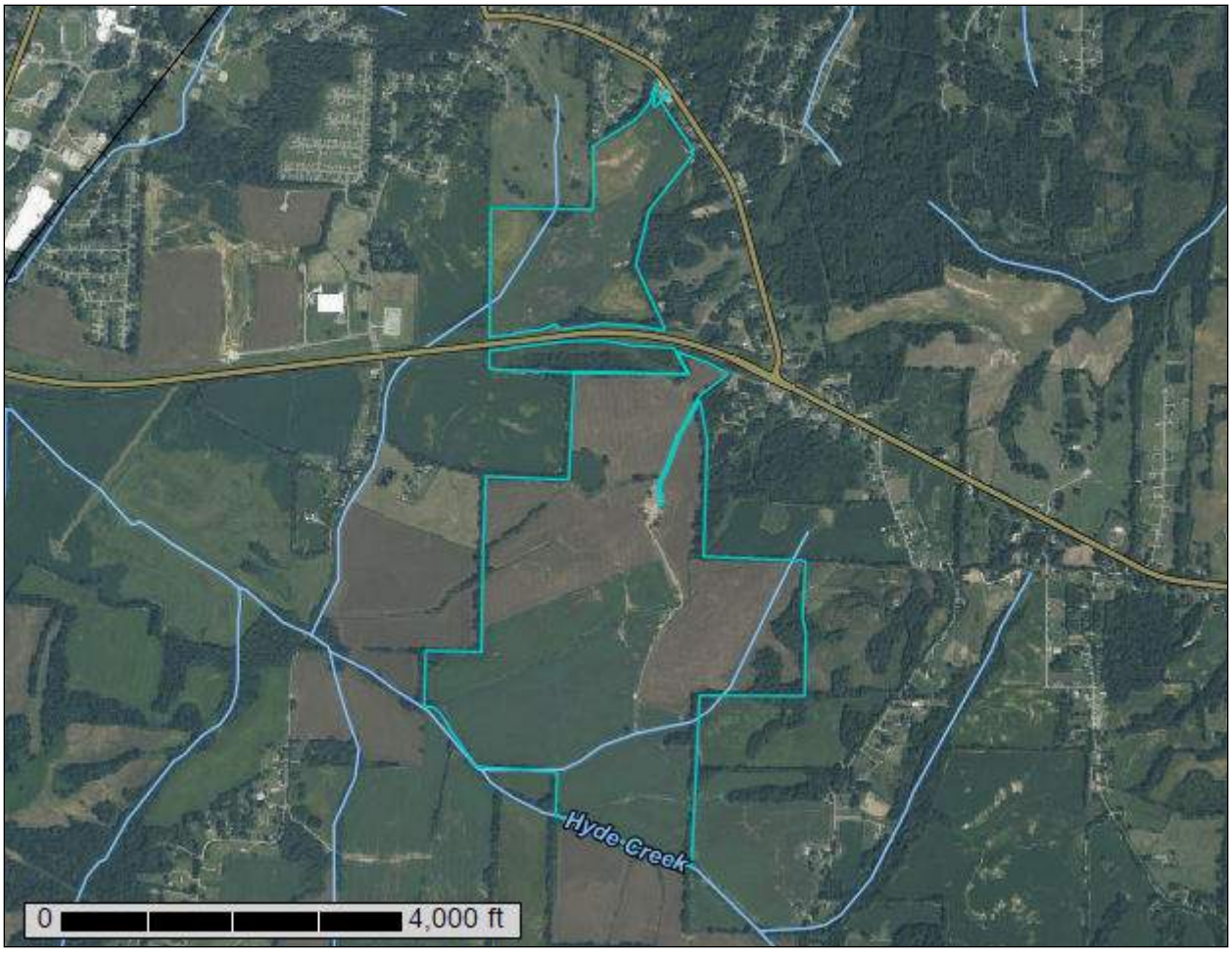
NRCS

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 Lauderdale County, Tennessee

SR Ripley II



October 14, 2022

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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Contents

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.

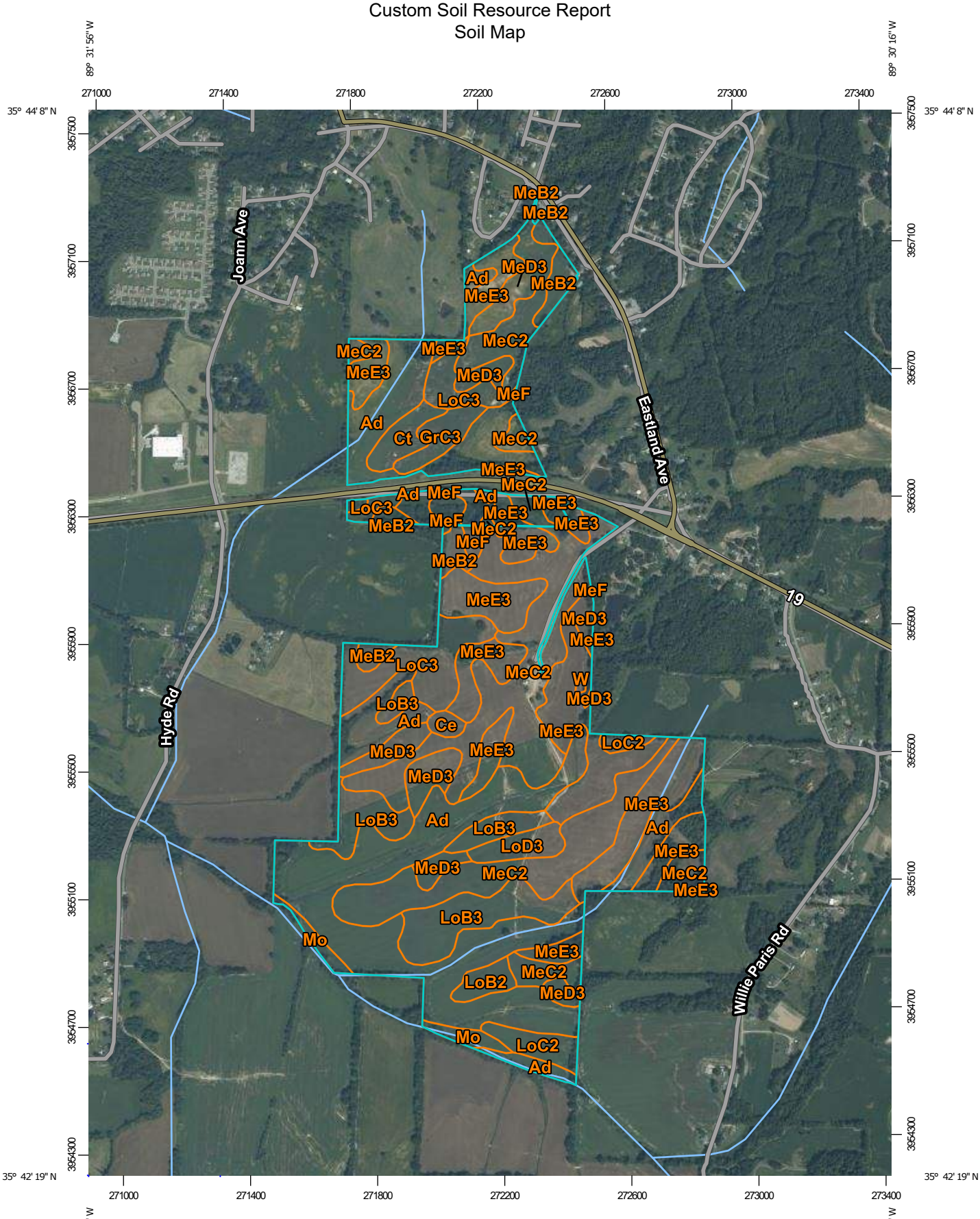
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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.

Soil Map



Map Scale: 1:16,300 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 200 400 800 1200

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

Soil Survey Area: Lauderdale County, Tennessee
Survey Area Data: Version 23, Sep 15, 2022

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

Date(s) aerial images were photographed: Sep 9, 2019—Sep 15, 2019

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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ad	Adler silt loam, 0 to 2 percent slopes, occasionally flooded	115.5	26.6%
Ce	Center silt loam, 0 to 3 percent slopes	2.3	0.5%
Ct	Convent silt loam, occasionally flooded	5.6	1.3%
GrC3	Grenada silt loam, 5 to 8 percent slopes, severely eroded	6.1	1.4%
LoB2	Loring silt loam, 2 to 5 percent slopes, eroded	4.0	0.9%
LoB3	Loring silt loam, 2 to 5 percent slopes, severely eroded	31.8	7.3%
LoC2	Loring silt loam, 5 to 8 percent slopes, eroded	7.6	1.7%
LoC3	Loring silt loam, 5 to 8 percent slopes, severely eroded	24.6	5.7%
LoD3	Loring silt loam, 8 to 12 percent slopes, severely eroded	5.7	1.3%
MeB2	Memphis silt loam, 2 to 5 percent slopes, moderately eroded, northern phase	12.1	2.8%
MeC2	Memphis silt loam, 5 to 8 percent slopes, moderately eroded, northern phase	97.4	22.4%
MeD3	Memphis silt loam, 8 to 12 percent slopes, severely eroded, northern phase	27.3	6.3%
MeE3	Memphis silt loam, 12 to 20 percent slopes, severely eroded, northern phase	83.0	19.1%
MeF	Memphis silt loam, 20 to 40 percent slopes, northern phase	6.4	1.5%
Mo	Morganfield silt loam, occasionally flooded	4.9	1.1%
W	Water	0.2	0.1%
Totals for Area of Interest		**434.6**	**100.0%**

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.

Lauderdale County, Tennessee

Ad—Adler silt loam, 0 to 2 percent slopes, occasionally flooded

Map Unit Setting

National map unit symbol: 2wn57
Elevation: 200 to 500 feet
Mean annual precipitation: 50 to 53 inches
Mean annual air temperature: 47 to 71 degrees F
Frost-free period: 175 to 214 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Adler, occasionally flooded, and similar soils: 89 percent
Minor components: 11 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Adler, Occasionally Flooded

Setting

Landform: Natural levees, alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-silty alluvium

Typical profile

Ap - 0 to 5 inches: silt loam
Bw - 5 to 23 inches: silt loam
Cg - 23 to 80 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
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 18 to 36 inches
Frequency of flooding: OccasionalNone
Frequency of ponding: None
Calcium carbonate, maximum content: 3 percent
Available water supply, 0 to 60 inches: High (about 10.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Ecological site: F134XY014AL - Northern Non-Acid Floodplain - PROVISIONAL
Hydric soil rating: No

Minor Components

Morganfield, occasionally flooded

Percent of map unit: 7 percent

Landform: Natural levees, alluvial fans
Landform position (three-dimensional): Rise
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Ecological site: F134XY014AL - Northern Non-Acid Floodplain - PROVISIONAL
Hydric soil rating: No

Convent, occasionally flooded
Percent of map unit: 4 percent
Landform: — error in exists on —
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F134XY015AL - Northern Non-Acid Moderately Wet Floodplain - PROVISIONAL
Hydric soil rating: No

Ce—Center silt loam, 0 to 3 percent slopes

Map Unit Setting
National map unit symbol: 2wn5h
Elevation: 230 to 460 feet
Mean annual precipitation: 50 to 53 inches
Mean annual air temperature: 46 to 70 degrees F
Frost-free period: 192 to 228 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Center and similar soils: 91 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Center

Setting
Landform: Flats, stream terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Riser, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess

Typical profile
Ap - 0 to 9 inches: silt loam
Bt - 9 to 35 inches: silty clay loam
C - 35 to 80 inches: silt loam

Properties and qualities
Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 12 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Hydric soil rating: No

Minor Components

Routon

Percent of map unit: 9 percent
Landform: Stream terraces, depressions
Landform position (two-dimensional): Toeslope, summit
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Ct—Convent silt loam, occasionally flooded

Map Unit Setting

National map unit symbol: m159
Elevation: 20 to 150 feet
Mean annual precipitation: 39 to 59 inches
Mean annual air temperature: 61 to 70 degrees F
Frost-free period: 214 to 228 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Convent and similar soils: 84 percent
Minor components: 16 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Convent

Setting

Landform: Flood plains
Landform position (three-dimensional): Talf
Parent material: Silty alluvium

Typical profile

H1 - 0 to 7 inches: silt loam
H2 - 7 to 62 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
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 12 to 17 inches
Frequency of flooding: NoneOccasional
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very high (about 13.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F134XY015AL - Northern Non-Acid Moderately Wet Floodplain - PROVISIONAL
Hydric soil rating: No

Minor Components

Minor componenets

Percent of map unit: 8 percent
Hydric soil rating: Unranked

Rosebloom

Percent of map unit: 8 percent
Landform: Flood plains
Ecological site: F134XY020AL - Northern Wet Alluvial Flat - PROVISIONAL
Hydric soil rating: Yes

GrC3—Grenada silt loam, 5 to 8 percent slopes, severely eroded

Map Unit Setting

National map unit symbol: 2v7sc
Elevation: 260 to 480 feet
Mean annual precipitation: 45 to 61 inches
Mean annual air temperature: 50 to 70 degrees F
Frost-free period: 206 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Grenada and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Grenada

Setting

Landform: Loess hills
Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loess

Typical profile

Ap - 0 to 6 inches: silt loam
Bw - 6 to 14 inches: silt loam
E - 14 to 18 inches: silt loam
Btx - 18 to 79 inches: silt loam

Properties and qualities

Slope: 5 to 8 percent
Depth to restrictive feature: 10 to 20 inches to fragipan
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 8 to 17 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Hydric soil rating: No

LoB2—Loring silt loam, 2 to 5 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2v7sm
Elevation: 260 to 410 feet
Mean annual precipitation: 35 to 63 inches
Mean annual air temperature: 47 to 71 degrees F
Frost-free period: 189 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Loring and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Loring

Setting

Landform: Loess hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loess

Typical profile

Ap - 0 to 6 inches: silt loam
Bt - 6 to 24 inches: silt loam
Btx - 24 to 48 inches: silt loam
C - 48 to 80 inches: silt loam

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: 24 to 30 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 28 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Hydric soil rating: No

LoB3—Loring silt loam, 2 to 5 percent slopes, severely eroded

Map Unit Setting

National map unit symbol: 2wn67
Elevation: 280 to 460 feet
Mean annual precipitation: 50 to 55 inches
Mean annual air temperature: 47 to 71 degrees F
Frost-free period: 192 to 228 days
Farmland classification: Not prime farmland

Map Unit Composition

Loring and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Loring

Setting

Landform: Loess hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loess

Typical profile

Ap - 0 to 6 inches: silt loam
Bt - 6 to 24 inches: silt loam
Btx - 24 to 48 inches: silt loam
C - 48 to 80 inches: silt loam

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: 10 to 35 inches to fragipan
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 10 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C/D
Hydric soil rating: No

LoC2—Loring silt loam, 5 to 8 percent slopes, eroded

Map Unit Setting

National map unit symbol: m15s
Elevation: 250 to 410 feet
Mean annual precipitation: 39 to 59 inches
Mean annual air temperature: 59 to 61 degrees F
Frost-free period: 214 to 228 days
Farmland classification: Not prime farmland

Map Unit Composition

Loring and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Loring

Setting

Landform: Loess hills
Landform position (three-dimensional): Side slope
Parent material: Loess

Typical profile

H1 - 0 to 7 inches: silt loam
H2 - 7 to 24 inches: silt loam
H3 - 24 to 62 inches: silt loam

Properties and qualities

Slope: 5 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None

Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Hydric soil rating: No

LoC3—Loring silt loam, 5 to 8 percent slopes, severely eroded

Map Unit Setting
National map unit symbol: 2v7sk
Elevation: 280 to 490 feet
Mean annual precipitation: 35 to 63 inches
Mean annual air temperature: 47 to 71 degrees F
Frost-free period: 189 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition
Loring and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Loring

Setting
Landform: Loess hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Loess

Typical profile
Ap - 0 to 5 inches: silt loam
Bt - 5 to 20 inches: silt loam
Btx - 20 to 65 inches: silt loam

Properties and qualities
Slope: 5 to 8 percent
Depth to restrictive feature: 14 to 30 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 11 to 14 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D

Hydric soil rating: No

LoD3—Loring silt loam, 8 to 12 percent slopes, severely eroded

Map Unit Setting

National map unit symbol: 2v7sl
Elevation: 280 to 490 feet
Mean annual precipitation: 35 to 63 inches
Mean annual air temperature: 47 to 71 degrees F
Frost-free period: 189 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Loring and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Loring

Setting

Landform: Loess hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess

Typical profile

Ap - 0 to 4 inches: silt loam
Bt - 4 to 20 inches: silt loam
Btx - 20 to 60 inches: silt loam
C - 60 to 79 inches: silt loam

Properties and qualities

Slope: 8 to 12 percent
Depth to restrictive feature: 14 to 30 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 12 to 33 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Hydric soil rating: No

MeB2—Memphis silt loam, 2 to 5 percent slopes, moderately eroded, northern phase

Map Unit Setting

National map unit symbol: 2t23z
Elevation: 260 to 540 feet
Mean annual precipitation: 50 to 54 inches
Mean annual air temperature: 47 to 71 degrees F
Frost-free period: 182 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Memphis, eroded, north, and similar soils: 88 percent
Minor components: 12 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Memphis, Eroded, North

Setting

Landform: Loess hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Fine-silty noncalcareous loess

Typical profile

Ap - 0 to 6 inches: silt loam
Bt1 - 6 to 18 inches: silty clay loam
Bt2 - 18 to 74 inches: silt loam
C - 74 to 80 inches: silt loam

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
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: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very high (about 13.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F134XY002AL - Northern Deep Loess Summit - PROVISIONAL
Hydric soil rating: No

Minor Components

Lexington

Percent of map unit: 6 percent
Landform: Loess hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F134XY003AL - Northern Loess Interfluve - PROVISIONAL
Hydric soil rating: No

Loring

Percent of map unit: 4 percent
Landform: Loess hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F134XY012AL - Northern Loess Fragipan Upland - PROVISIONAL
Hydric soil rating: No

Grenada

Percent of map unit: 2 percent
Landform: Loess hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Base slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F134XY012AL - Northern Loess Fragipan Upland - PROVISIONAL
Hydric soil rating: No

MeC2—Memphis silt loam, 5 to 8 percent slopes, moderately eroded, northern phase

Map Unit Setting

National map unit symbol: 2y70s
Elevation: 300 to 540 feet
Mean annual precipitation: 50 to 54 inches
Mean annual air temperature: 47 to 71 degrees F
Frost-free period: 182 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Memphis, northern phase, and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Memphis, Northern Phase

Setting

Landform: Loess hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Fine-silty noncalcareous loess

Typical profile

Ap - 0 to 6 inches: silt loam
Bt1 - 6 to 18 inches: silty clay loam
Bt2 - 18 to 74 inches: silt loam
C - 74 to 80 inches: silt loam

Properties and qualities

Slope: 5 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
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: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very high (about 13.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F134XY002AL - Northern Deep Loess Summit - PROVISIONAL
Hydric soil rating: No

Minor Components

Loring, northern phase

Percent of map unit: 5 percent
Landform: Loess hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F134XY012AL - Northern Loess Fragipan Upland - PROVISIONAL
Hydric soil rating: No

MeD3—Memphis silt loam, 8 to 12 percent slopes, severely eroded, northern phase

Map Unit Setting

National map unit symbol: 2y722
Elevation: 210 to 600 feet
Mean annual precipitation: 50 to 54 inches
Mean annual air temperature: 47 to 71 degrees F
Frost-free period: 182 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Memphis, northern phase, and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Memphis, Northern Phase

Setting

Landform: Loess hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Fine-silty noncalcareous loess

Typical profile

Ap - 0 to 5 inches: silt loam
Bt - 5 to 38 inches: silt loam
C - 38 to 80 inches: silt loam

Properties and qualities

Slope: 8 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
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: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very high (about 13.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F134XY002AL - Northern Deep Loess Summit - PROVISIONAL
Hydric soil rating: No

Minor Components

Loring

Percent of map unit: 5 percent
Landform: Loess hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F134XY012AL - Northern Loess Fragipan Upland - PROVISIONAL
Hydric soil rating: No

MeE3—Memphis silt loam, 12 to 20 percent slopes, severely eroded, northern phase

Map Unit Setting

National map unit symbol: 2y721
Elevation: 210 to 600 feet
Mean annual precipitation: 35 to 63 inches
Mean annual air temperature: 59 to 72 degrees F
Frost-free period: 195 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Memphis, northern phase, and similar soils: 91 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Memphis, Northern Phase

Setting

Landform: Loess hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex, linear
Parent material: Fine-silty noncalcareous loess

Typical profile

Ap - 0 to 5 inches: silt loam
Bt - 5 to 38 inches: silt loam
C - 38 to 80 inches: silt loam

Properties and qualities

Slope: 5 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
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: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very high (about 13.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F134XY001TN - Northern Deep Loess Backslope Mesophytic Forest
Hydric soil rating: No

Minor Components

Loring

Percent of map unit: 5 percent
Landform: Loess hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Lexington

Percent of map unit: 4 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

MeF—Memphis silt loam, 20 to 40 percent slopes, northern phase

Map Unit Setting

National map unit symbol: 2t23x
Elevation: 200 to 540 feet
Mean annual precipitation: 50 to 54 inches
Mean annual air temperature: 47 to 71 degrees F
Frost-free period: 182 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Memphis, northern phase, and similar soils: 91 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Memphis, Northern Phase

Setting

Landform: Loess hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Fine-silty noncalcareous loess

Typical profile

A - 0 to 7 inches: silt loam
Bt1 - 7 to 18 inches: silty clay loam
Bt2 - 18 to 74 inches: silt loam
C - 74 to 108 inches: silt loam

Properties and qualities

Slope: 20 to 40 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
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: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very high (about 13.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F134XY001TN - Northern Deep Loess Backslope Mesophytic Forest
Hydric soil rating: No

Minor Components

Natchez

Percent of map unit: 9 percent
Landform: Loess bluffs
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Mo—Morganfield silt loam, occasionally flooded

Map Unit Setting

National map unit symbol: m161

Elevation: 230 to 490 feet
Mean annual precipitation: 39 to 59 inches
Mean annual air temperature: 59 to 61 degrees F
Frost-free period: 214 to 228 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Morganfield and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Morganfield

Setting
Landform: Flood plains
Landform position (three-dimensional): Talf
Parent material: Silty alluvium

Typical profile
H1 - 0 to 9 inches: silt loam
H2 - 9 to 60 inches: silt loam

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
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 36 to 48 inches
Frequency of flooding: NoneOccasional
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very high (about 13.2 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B
Ecological site: F134XY014AL - Northern Non-Acid Floodplain - PROVISIONAL
Hydric soil rating: No

W—Water

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

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Appendix C – Biological Resources-Related Correspondence and Supporting Information

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