

DRY LAND APPROVED JURISDICTIONAL DETERMINATION FORM¹
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

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): January 27, 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Rock Island District, Carroll County Redemption, MVR-2021-1729

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Iowa County/parish/borough: Carroll City: Carroll
Center coordinates of site (lat/long in degree decimal format): Lat. 42.062636 °, Long. -94.855692 °
Universal Transverse Mercator: NAD 83

Name of nearest waterbody: Middle Racoon River

Name of watershed or Hydrologic Unit Code (HUC): HUC 12: 071000070203 – City of Carroll-Middle Racoon River

- ☒ Check if map/diagram of review area is 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: January 27, 2022
- ☐ 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.

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are **no** “*waters of the U.S.*” within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area.

SECTION III: 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: Joint application and project plans, December 2021
- ☐ 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:
- ☒ U.S. Geological Survey Hydrologic Atlas: Regulatory Viewer with NHD layer, map printed January 2022
- ☒ USGS NHD data.
- ☐ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: Regulatory Viewer with topographic layer, map printed January 2022
- ☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Web Soil Survey, map printed January 2022
- ☒ National wetlands inventory map(s). Cite name: NWI Mapper, map printed January 2022
- ☐ State/Local wetland inventory map(s):
- ☒ FEMA/FIRM maps: FEMA Floodplain Map, map printed January 2022
- ☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): Regulatory Viewer with historic aerial layers, dated: 1930, 1950, 1960, 1970, 1980, 1990, 2002, 2010, and 2017; Google Earth map, dated 2019
- ☐ or ☒ Other (Name & Date): Regulatory Viewer with LIDAR and hillshade layers, January 2022
- ☐ Previous determination(s). File no. and date of response letter:
- ☐ Applicable/supporting case law:
- ☐ Applicable/supporting scientific literature:
- ☐ Other information (please specify):

B. REQUIRED ADDITIONAL COMMENTS TO SUPPORT JD. EXPLAIN RATIONALE FOR DETERMINATION THAT THE REVIEW AREA ONLY INCLUDES DRY LAND: This area is approximately 1.5 acres. It was actively farmed between 1930 and 1980. There are no wetland signatures or wet-appearing areas on the historic maps. There are no waters in this area listed on the NHD or NWI. The area does contain hydric soils based on LIDAR and hillshade, this area's elevation is above the stream corridor. Besides the mapped hydric soils, there are no other indicators that a wetland is present.

¹ This form is for use only in recording approved JDs involving dry land. It extracts the relevant elements of the longer approved JD form in use since 2007 for aquatic areas and adds no new fields.

An aerial photograph of a residential area. A red line is drawn across the image, likely indicating a property boundary or subdivision line. The text 'DL SUBDIV' is overlaid in large, green, bold letters, partially obscured by the red line. The background shows a mix of green grass, brown dirt, and some structures, including a white building and a small orange-roofed structure.


$$1'' = 60'$$



National Wetlands Inventory

surface waters and wetlands

ABOUT

GET DATA

PRINT

FIND LOCATION

BASEMAPS >



Measure

LEGEND

General

Description

Reports

About

This **7.21** acre **Freshwater Emergent Wetland** habitat is classified as a **PEM1Cx**. For a complete code description, click [here](#).

The wetlands and deepwater habitats in this area were photo interpreted using **1:40,000** scale, **color infrared** imagery from **2002**. Click [here](#) for project specific mapping conventions and information.

[Zoom to wetland](#)

[Zoom to project area](#)

1:2,257

- Regulatory Viewer
- Regulatory Map
- Compliance Viewer
- IPaC
- I-Sites
- Mitigation Banking
- IL IAS

Rock Island District Regulatory Viewer





Layer List

- ☐ Section 10 Waters
- ☒ IA ortho 1930 (External Web GIS Service)
- ☐ IA ortho 1950 (External Web GIS Service)
- ☐ IA ortho 1960 (External Web GIS Service)
- ☐ IA ortho 1970 (External Web GIS Service)
- ☐ IA ortho 1980 (External Web GIS Service)
- ☐ IA ortho 1980 cir (External Web GIS Service)
- ☐ IA ortho 1990 (External Web GIS Service)
- ☐ IA ortho 2002 cir (External Web GIS Service)
- ☐ IA naip 2004 nc (External Web GIS Service)
- ☐ IA naip 2005 nc (External Web GIS Service)
- ☐ IA naip 2006 nc (External Web GIS Service)
- ☐ IA naip 2007 nc (External Web GIS Service)
- ☐ IA naip 2008 nc (External Web GIS Service)
- ☐ IA naip 2009 nc (External Web GIS Service)

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- ☐ IA naip 2009 nc (External Web GIS Service) ...

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Show search results for 42.0621, -94.8544





Layer List

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- ☐ IA ortho 1930 (External Web GIS Service) ...
- ☐ IA ortho 1950 (External Web GIS Service) ...
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- ☐ IA naip 2009 nc (External Web GIS Service) ...



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▶  IA naip 2009 nc (External Web GIS Service) ...

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Iowa State University GIS Facility, Iowa



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Home

Refresh

42.0621, -94.8544

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Regulatory Map

Compliance Viewer

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42.0621, -94.8544

Show search results for 42.0621, -94.8544



Layer List

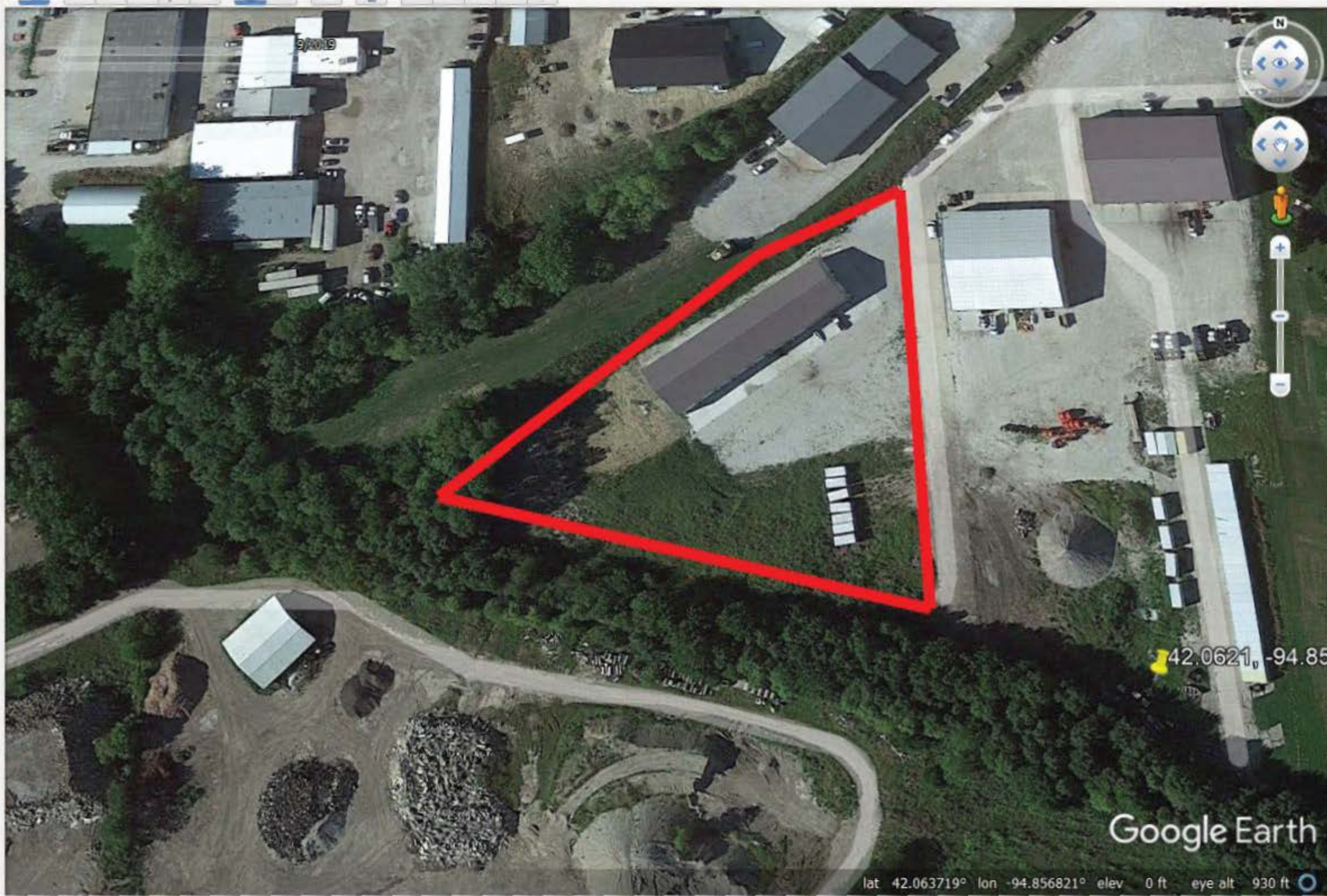
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- ☐ IA ortho 2007 2010 nc (External Web GIS Service) ...
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- ☐ IA naip 2013 cir (External Web GIS Service) ...

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 - ☐ IA naip 2017 cir (External Web GIS Service) ...
 - ☒ IA naip 2017 nc (External Web GIS Service) ...
 - ☐ MVR_NAIP_2017 ...
 - ☐ MVR Quad Maps ...
 - ☐ IA LiDAR DEM 1m NAVD88 ft ...
 - ☐ IA LiDAR DEM 1m hillshade ...
 - ☐ IA LiDAR DEM 3m NAVD88 ft ...
 - ☐ IA LiDAR DEM 3m hillshade ...
 - ☐ IL_LiDAR_DEM_1m_NAVD88_ft ...
 - ☐ IL LiDAR DEM 1m hillshade ...



42.0621, -94.85

Google Earth

lat 42.063719° lon -94.856821° elev 0 ft eye alt 930 ft

Regulatory Viewer

Regulatory Map

Compliance Viewer

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Mitigation Banking

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Layer List



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- ☐ IA LiDAR DEM 3m hillshade ...
- ☐ IL_LiDAR_DEM_1m_NAVD88_ft ...
- ☐ IL_LiDAR_DEM_1m_hillshade ...
- ☐ IL NAIP 2004 (External Web GIS Service) ...
- ☐ IL NAIP 2005 (External Web GIS Service) ...

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Layer List

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PLSS...

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PADUS (External Web GIS Service)...

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Real Estate for Reg Viewer...

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National Hydrography Dataset (NHD) (External Web GIS Service)...

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Watersheds (External Web GIS Service)...

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Section 10 Waters...

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IA ortho 1930 (External Web GIS Service)...

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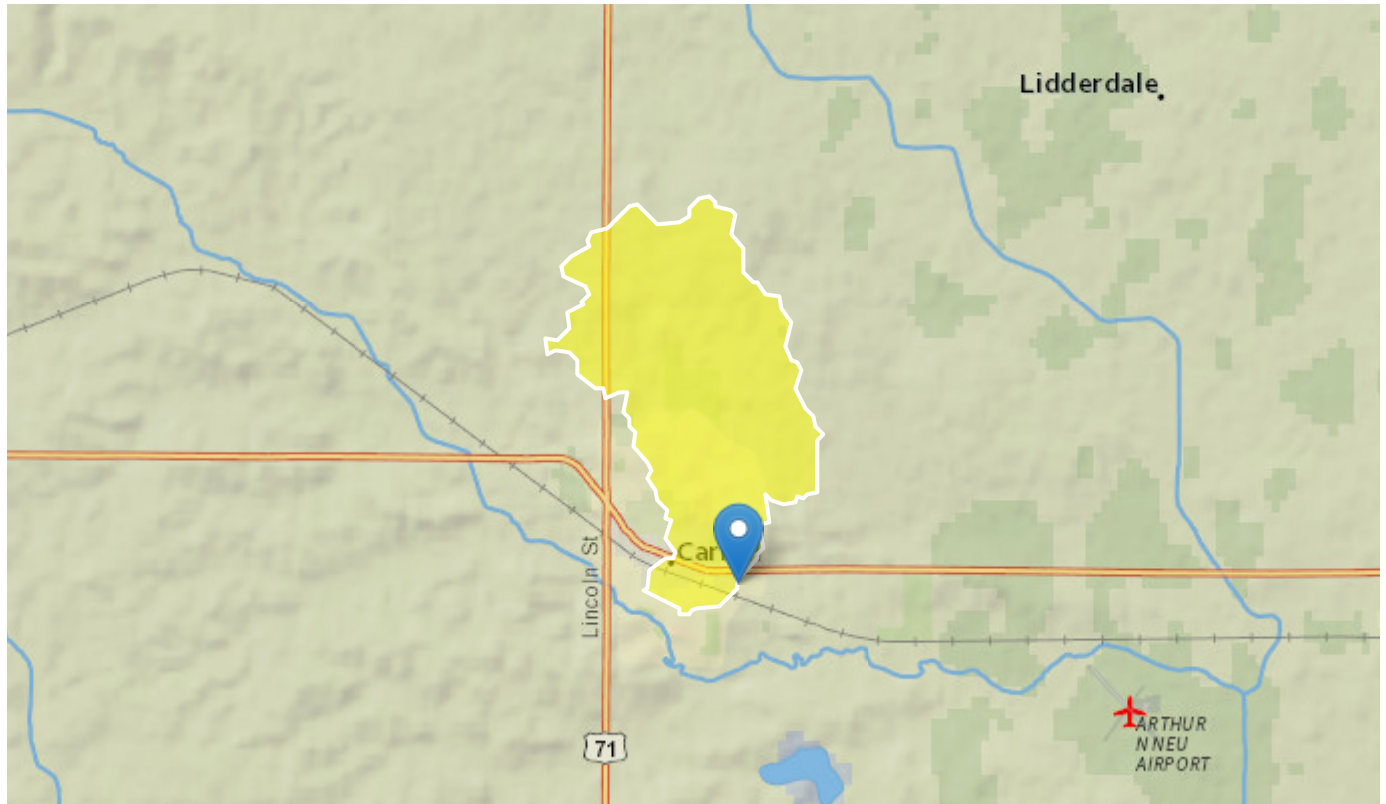
StreamStats Report

Region ID: IA

Workspace ID: IA20211222165112805000

Clicked Point (Latitude, Longitude): 42.06227, -94.85627

Time: 2021-12-22 10:51:37 -0600



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BASLENAH	Basin length from outlet to basin divide determined using the method in the ArchHydro Toolset	3.61	miles
BFI	Proportion of mean annual flow that is from ground water (base flow)	0.58299	dimensionless
BSHAPE	Basin Shape Factor for Area	2.67	dimensionless
BSLDEM10M	Mean basin slope computed from 10 m DEM	3.56	percent
CCM	Constant of channel maintenance computed as drainage area divided by total stream length	3.33	square mile per mile

Parameter Code	Parameter Description	Value	Unit
CSL100	Longest flow path slope in feet per miles, using DEM	24.4	feet per mi
CSL10_85	Change in elevation divided by length between points 10 and 85 percent of distance along main channel to basin divide - main channel method not known	21.1	feet per mi
DESMOIN	Area underlain by Des Moines Lobe	99.948	percent
DRNAREA	Area that drains to a point on a stream	4.88	square miles
DRNFREQ	Number of first order streams per square mile of drainage area	0.82	1st-order streams per square mile
FOSTREAM	Number of First Order Streams	4	dimensionless
HIGHREG	HIGHREG	2	dimensionless
HYSEP	Median percentage of baseflow to annual streamflow	56.53	percent
I24H10Y	Maximum 24-hour precipitation that occurs on average once in 10 years	4.4	inches
LC11CRPHAY	Percentage of cultivated crops and hay, classes 81 and 82, from NLCD 2011	55.1	percent
LC11DEV	Percentage of developed (urban) land from NLCD 2011 classes 21-24	44.9	percent
LC11IMP	Average percentage of impervious area determined from NLCD 2011 impervious dataset	13.9	percent
PRECIP	Mean Annual Precipitation	32.7	inches
PRJULDEC10	Basin average mean precipitation for July to December from PRISM 1981-2010	2.83	inches
RSD	Relative stream density first defined in SIR 2012_5171	9.11	dimensionless
SSURGOA	Percentage of area of Hydrologic Soil Type A from SSURGO	0	percent
SSURGOB	Percentage of area of Hydrologic Soil Type B from SSURGO	99.9	percent
SSURGOC	Percentage of area of Hydrologic Soil Type C from SSURGO	0.11	percent

Parameter Code	Parameter Description	Value	Unit
SSURGOD	Percentage of area of Hydrologic Soil Type D from SSURGO	0	percent
SSURGOKSAT	Saturated hydraulic conductivity in micrometers per second from NRCS SSURGO database	8.9	micrometers per second
STREAM_VARG	Streamflow variability index as defined in WRIR 02-4068, computed from regional grid	0.533	dimensionless
STRMTOT	total length of all mapped streams (1:24,000-scale) in the basin	1.464	miles
TAU_ANN_G	Tau, Average annual base-flow recession time constant as defined in SIR 2008-5065	33.19	days

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

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Application Version: 4.6.2

StreamStats Services Version: 1.2.22

NSS Services Version: 2.1.2

Hydric Rating by Map Unit—Carroll County, Iowa




Map Scale: 1:928 if printed on A landscape (11" x 8.5") sheet.
 0 10 20 40 60 Meters
 0 45 90 180 270 Feet
 Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84









Natural Resources
Conservation Service







Web Soil Survey
National Cooperative Soil Survey

12/22/2021
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MAP LEGEND**Area of Interest (AOI)**
 Area of Interest (AOI)
Soils**Soil Rating Polygons**


-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available






Soil Rating Lines

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available


Soil Rating Points

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available

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 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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: Carroll County, Iowa
Survey Area Data: Version 26, Sep 14, 2021

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

Date(s) aerial images were photographed: Apr 30, 2012—Sep 21, 2017

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.

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
L507	Canisteo clay loam, Bemis moraine, 0 to 2 percent slopes	100	1.9	100.0%
Totals for Area of Interest			1.9	100.0%

Description

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

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

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

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

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

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

References:

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

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

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

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

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

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

Rating Options

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower