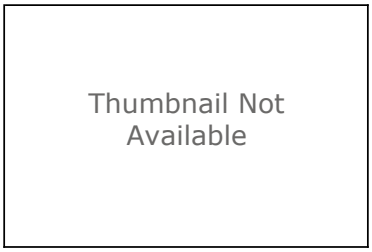
ACPF Field Boundary Dataset - Upper Mississippi River Basin

Shapefile



Tags

United States Department of Agriculture (USDA), USDA/ARS, Agricultural Conservation Planning Framework, ACPF, scientificInformation, Farming, boundaries, Field Boundaries, farming, Digitizing, NASS Crop Data Layer, conservation planning, USDA/ARS, Agricultural Conservation Planning Framework, ACPF, Upper Mississippi River Basin, UMRB

Summary

Improving the quality of water discharged from agricultural watersheds requires comprehensive and adaptive approaches for planning and implementing conservation practices. These measures will need to consider landscape hydrology, distributions of soil types, land cover, and crop distributions in an integrated manner. The two most consistent challenges to these efforts will be consistency and reliability of data, and the capacity to translate conservation planning from watershed to farm and field scales. The translation of scale is required because, while conservation practices can be planned based on a watershed scale framework, they must be implemented by landowners in specific fields and riparian sites that are under private ownership. To support these goals, it has been necessary to develop planning approaches, high-resolution spatial datasets, and conservation practice assessment tools that will allow the agricultural and conservation communities to characterize and mitigate these challenges. The field boundary dataset represents a spatial framework for assembling and maintaining geospatial data to support conservation planning at the scale where conservation practices are implemented.

Description

This field boundaries dataset has been assembled to support field-scale agricultural conservation planning using the USDA/ARS Agricultural Conservation Planning Framework (ACPF). The original data used to create this database are the Farm Service Agency's (FSA) pre-2008 Farm Bill Common Land Unit (CLU) datasets. A portion of metadata found herein pertains to the USDA FSA CLU. The remaining information has been developed to reflect the repurposing of the data in its aggregated form. It is important to note that all USDA programmatic and ownership information that was associated with the original data have been removed and has not been retained or archived by the ARS. Beyond that, these data has been extensively edited to reflect crop-specific land use consistent with land cover as derived from NASS Crop Data Layer datasets and aerial photography, and no longer reflects discrete ownership patterns.

The ACPF field boundaries feature class incorporates two additional resources that form the Upper Mississippi River Basin (UMRB) ACPF Land Use database. The UMRB ACPF Fields Crop History table holds the dominant land use class, derived from the NASS CDL, for individual fields from 2010 to 2020. The UMRB ACPF Land Use table hold summary land use information for individual fields for 2015 to 2020 including an assigned General Land Use (GenLU) that represent the cropping system over that period. In lieu of a data dictionary for these resources, each dataset has a FGDC-compliant metadata file using the North American ISO 19115-2003 profile in .xml format.

FSA: The common land unit (CLU) dataset consists of digitized farm tract and field boundaries and associated attribute data. The USDA Farm Service Agency (FSA) defines farm fields as agricultural land that is delineated by natural and man-made boundaries such as road ways, tree lines, waterways, fence lines, etc. Field boundaries are visible features that can be identified and delineated on aerial photography and digital imagery. Farm tracts are defined by FSA as sets of contiguous fields under single ownership. Common land units are used to administer USDA farm commodity support and conservation programs in a GIS environment. The CLU data set was prepared by digitizing farm tracts and fields using 1:7920 scale rectified photomaps that have been maintained by FSA in USDA Field Service Centers. Using the photomaps as reference tract and field boundaries were digitized on-screen with digital orthophotography using ESRIs (Environmental Systems Research Institute) ArcView GIS Product. Each of the boundaries of the CLU are digitized to a tolerance of 3 meters (approximately 10 feet) from ground features visible on the digital orthophotograph. The base ortho imagery was produced by mosaicking digital orthophoto quarter quads (DOQs) into a seamless county image. The CLU were digitized from an image base of digital ortho

quadrangles mosaiked together creating a seamless image base. The moasaicking process eliminates or minimizes any offset that would normally be present between standard USGS quarter quadrangles. CLU datasets are projected in the UTM coordinate system, NAD 83.

Credits
There are no credits for this item.

Use limitations

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Extent

West -97.406847 **East** -84.958093
North 47.758758 **South** 36.745167

Scale Range

Maximum (zoomed in) 1:5,000
Minimum (zoomed out) 1:500,000

ArcGIS Metadata ►

Topics and Keywords ►

THEMES OR CATEGORIES OF THE RESOURCE farming, planningCadastre, geoscientificInformation, boundaries

* CONTENT TYPE Downloadable Data
EXPORT TO FGDC CSDGM XML FORMAT AS RESOURCE DESCRIPTION No

PLACE KEYWORDS Midwestern United States, Upper Mississippi River Basin, UMRB

TEMPORAL KEYWORDS 2009-2016 Aerial photography, 2009-2020 NASS Crop Data Layer

THEME KEYWORDS USA, United States Department of Agriculture (USDA), geoscientificInformation, farming, boundaries, field boundaries, farming, conservation planning

Hide Topics and Keywords ▲

Citation ►

TITLE ACPF Field Boundary Dataset - Upper Mississippi River Basin
PUBLICATION DATE 2020-04-01 00:00:00

EDITION 1

PRESENTATION FORMATS digital map
FGDC GEOSPATIAL PRESENTATION FORMAT vector digital data

Hide Citation ▲

Citation Contacts ►

RESPONSIBLE PARTY
ORGANIZATION'S NAME USDA, Agricultural Research Service, National Laboratory of Agriculture and the Environment
INDIVIDUAL'S NAME David James
CONTACT'S POSITION Geographic Information Specialist

CONTACT'S ROLE originator

Hide Citation Contacts ▲

Resource Details ►

DATASET LANGUAGES English (UNITED STATES)
DATASET CHARACTER SET utf8 - 8 bit UCS Transfer Format

STATUS completed
SPATIAL REPRESENTATION TYPE vector

PROCESSING ENVIRONMENT Microsoft Windows 10; Esri ArcGIS 10.8

ARCGIS ITEM PROPERTIES
* NAME UMRB_ACPFfields2020
* SIZE 1355.422
* LOCATION file://\\CURLEW\D$\ACPFproc\ADCcontributions\exportedForADC\UMRB\UMRB_ACPFfields2020.shp
  * ACCESS PROTOCOL Local Area Network

Hide Resource Details ▲

Extents ►

EXTENT
DESCRIPTION
Upper Mississippi River Basin, UMRB, HUC 07

GEOGRAPHIC EXTENT
GEOGRAPHIC DESCRIPTION
GEOGRAPHIC IDENTIFIER
VALUE Upper Mississippi River Basin

DESCRIPTION CONTAINS THE RESOURCE Yes

EXTENT
DESCRIPTION
Upper Mississippi River Basin

GEOGRAPHIC EXTENT
BOUNDING RECTANGLE
EXTENT TYPE Extent used for searching
* WEST LONGITUDE -97.406847
* EAST LONGITUDE -84.958093
* NORTH LATITUDE 47.758758
* SOUTH LATITUDE 36.745167
* EXTENT CONTAINS THE RESOURCE Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM
* WEST LONGITUDE -106259.982600
* EAST LONGITUDE 837713.991000
* SOUTH LATITUDE 1564046.457700
* NORTH LATITUDE 2751547.417000
* EXTENT CONTAINS THE RESOURCE Yes

Hide Extents ▲

Resource Points of Contact ►

POINT OF CONTACT
INDIVIDUAL'S NAME David James
ORGANIZATION'S NAME USDA, Agricultural Research Service, National Laboratory of Agriculture and the Environment
CONTACT'S ROLE point of contact

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Hide Contact information ▲

Hide Resource Points of Contact ▲

Resource Maintenance ►

RESOURCE MAINTENANCE
UPDATE FREQUENCY not planned

Hide Resource Maintenance ▲

Resource Constraints ►

LEGAL CONSTRAINTS
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Hide Resource Constraints ▲

Spatial Reference ►

ARCGIS COORDINATE SYSTEM
* TYPE Projected
* GEOGRAPHIC COORDINATE REFERENCE GCS_North_American_1983
* PROJECTION USA_Contiguous_Albers_Equal_Area_Conic_USGS_version
* COORDINATE REFERENCE DETAILS
PROJECTED COORDINATE SYSTEM
WELL-KNOWN IDENTIFIER 102039
X ORIGIN -16901100
Y ORIGIN -6972200
XY SCALE 266467840.99085236
Z ORIGIN -100000
Z SCALE 10000
M ORIGIN -100000
M SCALE 10000
XY TOLERANCE 0.001
Z TOLERANCE 0.001
M TOLERANCE 0.001
HIGH PRECISION true
LATEST WELL-KNOWN IDENTIFIER 102039
WELL-KNOWN TEXT PROJCS["USA_Contiguous_Albers_Equal_Area_Conic_USGS_version",GEOGCS

["GCS_North_American_1983",DATUM["D_North_American_1983",SPHEROID
["GRS_1980",6378137.0,298.257222101]],PRIMEM["Greenwich",0.0],UNIT
["Degree",0.0174532925199433]],PROJECTION["Albers"],PARAMETER["False_Easting",0.0],PARAMETER
["False_Northing",0.0],PARAMETER["Central_Meridian",-96.0],PARAMETER
["Standard_Parallel_1",29.5],PARAMETER["Standard_Parallel_2",45.5],PARAMETER
["Latitude_Of_Origin",23.0],UNIT["Meter",1.0],AUTHORITY["Esri",102039]]

REFERENCE SYSTEM IDENTIFIER
DIMENSION horizontal
* VALUE 102039
* CODESPACE Esri
* VERSION 8.1.2

Hide Spatial Reference ▲

Spatial Data Properties ►

VECTOR ►
* LEVEL OF TOPOLOGY FOR THIS DATASET geometry only

GEOMETRIC OBJECTS
FEATURE CLASS NAME UMRB_ACPFfields2020
* OBJECT TYPE composite
* OBJECT COUNT 2493249

Hide Vector ▲

ARCGIS FEATURE CLASS PROPERTIES ►
FEATURE CLASS NAME UMRB_ACPFfields2020
* FEATURE TYPE Simple
* GEOMETRY TYPE Polygon
* HAS TOPOLOGY FALSE
* FEATURE COUNT 2493249
* SPATIAL INDEX TRUE
* LINEAR REFERENCING FALSE

Hide ArcGIS Feature Class Properties ▲

Hide Spatial Data Properties ▲

Data Quality ►

SCOPE OF QUALITY INFORMATION ►
RESOURCE LEVEL feature
SCOPE DESCRIPTION
ATTRIBUTES
Yes

Hide Scope of quality information ▲

Hide Data Quality ▲

Geoprocessing history ►

PROCESS
PROCESS NAME
DATE 2021-09-08 07:33:36
TOOL LOCATION c:\program files (x86)\arcgis\desktop10.8\ArcToolbox\Toolboxes\Conversion Tools.tbx\FeatureClassToFeatureClass
COMMAND ISSUED
FeatureClassToFeatureClass
D:\ACPFproc\ADCcontributions\UMRB\ACPF_UMRB.gdb\UMRB_ACPFfields2020

```
D:\ACPFproc\ADCcontributions\exportedForADC\UMRB UMRB_ACPFfields2020.shp # "FBndID "FBndID"
true true false 255 Text 0
0 ,First,#,D:\ACPFproc\ADCcontributions\UMRB\ACPF_UMRB.gdb\UMRB_ACPFfields2020,FBndID,-1,-
1;Acres "Acres" true true false 4 Float 0
0 ,First,#,D:\ACPFproc\ADCcontributions\UMRB\ACPF_UMRB.gdb\UMRB_ACPFfields2020,Acres,-1,-
1;isAG "isAG" true true false 2 Short 0
0 ,First,#,D:\ACPFproc\ADCcontributions\UMRB\ACPF_UMRB.gdb\UMRB_ACPFfields2020,isAG,-1,-
1;updateYr "updateYr" true true false 2 Short 0
0 ,First,#,D:\ACPFproc\ADCcontributions\UMRB\ACPF_UMRB.gdb\UMRB_ACPFfields2020,updateYr,-1,-
1;Shape_Leng "Shape_Leng" false true true 8 Double 0
0 ,First,#,D:\ACPFproc\ADCcontributions\UMRB\ACPF_UMRB.gdb\UMRB_ACPFfields2020,Shape_Length,-
1,-1;Shape_Area "Shape_Area" false true true 8 Double 0
0 ,First,#,D:\ACPFproc\ADCcontributions\UMRB\ACPF_UMRB.gdb\UMRB_ACPFfields2020,Shape_Area,-
1,-1" #
```

INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

Hide Geoprocessing history ▲

Distribution ►

DISTRIBUTOR ►

CONTACT INFORMATION

INDIVIDUAL'S NAME David James

ORGANIZATION'S NAME USDA, Agricultural Research Service, National Laboratory of Agriculture and the Environment

CONTACT'S ROLE distributor

CONTACT INFORMATION ►

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Hide Distributor ▲

DISTRIBUTION FORMAT

* NAME Shapefile

VERSION 10.4.1

TRANSFER OPTIONS

* TRANSFER SIZE 1355.422

Hide Distribution ▲

Fields ►

DETAILS FOR OBJECT UMRB_ACPFfields2020 ►

* TYPE Feature Class

* ROW COUNT 2493249

DEFINITION

File geodatabase feature class of field boundaries for individual HUC12 watersheds

DEFINITION SOURCE

Author

FIELD FID ►
* ALIAS FID
* DATA TYPE OID
* WIDTH 4
* PRECISION 0
* SCALE 0
* FIELD DESCRIPTION
Internal feature number.

* DESCRIPTION SOURCE
Esri

* DESCRIPTION OF VALUES
Sequential unique whole numbers that are automatically generated.

Hide Field FID ▲

FIELD isAG ►
* ALIAS isAG
* DATA TYPE Integer
* WIDTH 5
* PRECISION 5
* SCALE 0
FIELD DESCRIPTION
Designation of agricutlural and non-agricultural land use

DESCRIPTION SOURCE
Author

LIST OF VALUES
VALUE 0
DESCRIPTION non-agricultural land
ENUMERATED DOMAIN VALUE DEFINITION SOURCE Originator

VALUE 1
DESCRIPTION agricultural land, excluding pasture (P) class
ENUMERATED DOMAIN VALUE DEFINITION SOURCE Originator

VALUE 2
DESCRIPTION Pasture|Grass|Hay
ENUMERATED DOMAIN VALUE DEFINITION SOURCE Originator

Hide Field isAG ▲

FIELD Shape ►
* ALIAS Shape
* DATA TYPE Geometry
* WIDTH 0
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
Feature geometry.

DESCRIPTION SOURCE
ESRI

LIST OF VALUES
VALUE Coordinates defining the features.
DESCRIPTION Coordinates
ENUMERATED DOMAIN VALUE DEFINITION SOURCE ESRI

* DESCRIPTION OF VALUES

Coordinates defining the features.

Hide Field Shape ▲

FIELD Shape_Area ►
* ALIAS Shape_Area
* DATA TYPE Double
* WIDTH 19
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
Area of feature in internal units squared.

DESCRIPTION SOURCE
ESRI

DESCRIPTION OF VALUES
Positive real numbers that are automatically generated.

Hide Field Shape_Area ▲

FIELD updateYr ►
* ALIAS updateYr
* DATA TYPE Integer
* WIDTH 5
* PRECISION 5
* SCALE 0

FIELD DESCRIPTION
The year in which the field boundaries were edited to reflect current land use. Row crop field boundaries greater than 40 acres and less than 75% majority land use were the primary domain of candidates.

DESCRIPTION SOURCE
Author

Hide Field updateYr ▲

FIELD FBndID ►
* ALIAS FBndID
* DATA TYPE String
* WIDTH 254
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
A unique field identifier constructed by concatenating the HUC12 identification code and a sequential number.

DESCRIPTION SOURCE
Author

DESCRIPTION OF VALUES
A unique field identifier constructed by concatenating the HUC12 identification code and a sequential number.

Hide Field FBndID ▲

FIELD Shape_Leng ►

* ALIAS Shape_Leng
* DATA TYPE Double
* WIDTH 19
* PRECISION 0
* SCALE 0

Hide Field Shape_Leng ▲

FIELD Acres ►
* ALIAS Acres
* DATA TYPE Single
* WIDTH 13
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
field size in acres

DESCRIPTION SOURCE
calculated

DESCRIPTION OF VALUES
Calculated values

Hide Field Acres ▲

Hide Details for object UMRB_ACPFfields2020 ▲

Hide Fields ▲

Metadata Details ►

METADATA LANGUAGE English (UNITED STATES)
METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format

SCOPE OF THE DATA DESCRIBED BY THE METADATA dataset
SCOPE NAME * dataset

* LAST UPDATE 2021-09-12

ARCGIS METADATA PROPERTIES
METADATA FORMAT ArcGIS 1.0
STANDARD OR PROFILE USED TO EDIT METADATA NAP
METADATA STYLE North American Profile of ISO19115 2003

CREATED IN ARCGIS FOR THE ITEM 2021-09-07 09:45:57
LAST MODIFIED IN ARCGIS FOR THE ITEM 2021-09-12 20:15:42

AUTOMATIC UPDATES
HAVE BEEN PERFORMED Yes
LAST UPDATE 2021-09-12 20:14:52

ITEM LOCATION HISTORY
ITEM COPIED OR MOVED 2015-04-13 08:37:18
FROM D:\Data\ACPF\ACPF_Database\ACPF_MetaData\FldBndy_meta\ACPF_FieldBndy_meta
TO \\NLAE08\Data\EDF_ACPF\ACPF_MetaData\FldBndy_meta\ACPF_FieldBndy_meta (1)

Hide Metadata Details ▲

Metadata Contacts ►

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ORGANIZATION'S NAME USDA, Agricultural Research Service, National Laboratory of Agriculture and the Environment
CONTACT'S ROLE point of contact

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ADMINISTRATIVE AREA Iowa
POSTAL CODE 50011
COUNTRY US
E-MAIL ADDRESS david.james@ars.usda.gov; dejames@iastate.edu

Hide Contact information ▲

Hide Metadata Contacts ▲

Metadata Maintenance ►

MAINTENANCE
UPDATE FREQUENCY not planned

Hide Metadata Maintenance ▲

Metadata Constraints ►

SECURITY CONSTRAINTS
CLASSIFICATION unclassified
CLASSIFICATION SYSTEM None

ADDITIONAL RESTRICTIONS
None

Hide Metadata Constraints ▲

Thumbnail and Enclosures ►

ENCLOSURE
ENCLOSURE TYPE File
DESCRIPTION OF ENCLOSURE original metadata
ORIGINAL METADATA DOCUMENT, WHICH WAS TRANSLATED yes
SOURCE METADATA FORMAT fgdc

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FGDC Metadata (read-only) ▼