

## ACPF Field Boundary Dataset: Iowa

File Geodatabase Feature Class

Thumbnail Not  
Available

### Tags

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

### 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 have 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 Iowa ACPF Land Use database. The Iowa ACPF Fields Crop History table holds the dominant land use class, derived from the NASS CDL, for individual fields from 2010 to 2019. The Iowa ACPF Land Use table hold summary land use information for individual fields for 2014 to 2019 including an assigned General Land Use (GenLU) that represent the cropping system over that period.

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 ESRI's (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 mosaicked together creating a seamless image base. The mosaicking 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

USDA/ARS National Laboratory for Agriculture and the Environment; USDA Farm Service Agency

### Use limitations

USDA-ARS makes no representation nor extends any warranties of any kind, either express or implied, of merchantability or fitness of the information obtained using the ACPF toolbox or data for any particular purpose, or that use of the ACPF toolbox or data will not infringe any patent, copyright, trademark, or other intellectual property rights, or any other express or implied warranties. In no event shall the creators, custodians, or distributors of this information be liable for any damages arising out of its use (or the inability to use it).

### Extent

**West** -96.617765 **East** -90.035314  
**North** 43.587326 **South** 40.328169

### 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

**TEMPORAL KEYWORDS** 2009-2019 Aerial photography, 2009-2019 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: Iowa

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 7 Version 6.1 (Build 7601) Service Pack 1; Esri ArcGIS 10.1.1.3143

### CREDITS

USDA/ARS National Laboratory for Agriculture and the Environment; USDA Farm Service Agency

### ARCGIS ITEM PROPERTIES

\* NAME IA\_ACPFields2019  
\* LOCATION file:///\\ARSIAAMN4-216C\E\$\Data\ACPF\IA\_byFieldAgriculture\Landuse\ADCcontributions\IowaFieldBoundaries.gdb  
\* ACCESS PROTOCOL Local Area Network

[Hide Resource Details ▲](#)

## Extents ►

### EXTENT

GEOGRAPHIC EXTENT  
GEOGRAPHIC DESCRIPTION  
GEOGRAPHIC IDENTIFIER  
VALUE Individual HUC12 watersheds  
DESCRIPTION CONTAINS THE RESOURCE Yes

### EXTENT

GEOGRAPHIC EXTENT  
BOUNDING RECTANGLE  
EXTENT TYPE Extent used for searching  
\* WEST LONGITUDE -96.617765  
\* EAST LONGITUDE -90.035314  
\* NORTH LATITUDE 43.587326  
\* SOUTH LATITUDE 40.328169  
\* EXTENT CONTAINS THE RESOURCE Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM  
\* WEST LONGITUDE -49668.897300  
\* EAST LONGITUDE 480190.597000  
\* SOUTH LATITUDE 1938159.712100  
\* NORTH LATITUDE 2288281.722800  
\* 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

### CONTACT INFORMATION ►

PHONE  
VOICE (515) 294-6858

### ADDRESS

TYPE postal  
DELIVERY POINT 1015 N University Blvd.  
CITY Ames  
ADMINISTRATIVE AREA Iowa  
POSTAL CODE 50011  
COUNTRY US  
E-MAIL ADDRESS david.james@ars.usda.gov

[Hide Contact Information ▲](#)

[Hide Resource Points of Contact ▲](#)

## Resource Maintenance ►

RESOURCE MAINTENANCE  
UPDATE FREQUENCY not planned

[Hide Resource Maintenance ▲](#)

## Resource Constraints ►

LEGAL CONSTRAINTS  
LIMITATIONS OF USE

In no event shall the creators, custodians, or distributors of this information be liable for any damages arising out of its use ( or the inability to use it).

CONSTRAINTS

LIMITATIONS OF USE

USDA-ARS makes no representation nor extends any warranties of any kind, either express or implied, of merchantability or fitness of the information obtained using the ACPF toolbox or data for any particular purpose, or that use of the ACPF toolbox or data will not infringe any patent, copyright, trademark, or other intellectual property rights, or any other express or implied warranties. In no event shall the creators, custodians, or distributors of this information be liable for any damages arising out of its use (or the inability to use it).

[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 10000

Z ORIGIN -100000

Z SCALE 10000

M ORIGIN -1000000

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 IA\_ACPFFields2019

\* OBJECT TYPE composite

\* OBJECT COUNT 717938

[Hide Vector ▲](#)

ARCGIS FEATURE CLASS PROPERTIES ►

FEATURE CLASS NAME IA\_ACPFFields2019

\* FEATURE TYPE Simple

\* GEOMETRY TYPE Polygon

\* HAS TOPOLOGY FALSE

\* FEATURE COUNT 717938

\* 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 2020-03-03 14:42:36  
 TOOL LOCATION c:\program files (x86)\arcgis\desktop10.7\ArcToolbox\Toolboxes\Data Management Tools.tbx\Append  
 COMMAND ISSUED  
 Append IAwest IA\_ACPFFields2019 TEST # #  
 INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

## PROCESS

PROCESS NAME  
 DATE 2020-09-04 10:28:41  
 TOOL LOCATION c:\program files (x86)\arcgis\desktop10.7\ArcToolbox\Toolboxes\Data Management Tools.tbx>DeleteField  
 COMMAND ISSUED  
 DeleteField IA\_ACPFFields2019  
 OBJECTID\_1;FBndID\_1;Acres\_1;isAG\_1;GenLU;AgLandUse;CropRotatn;CropSumry;CCCount;MixCount;maj10;pct10;maj11;pct11;maj12;pct12;maj13;pct13;m  
 INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

## PROCESS

PROCESS NAME  
 DATE 2020-09-12 10:03:01  
 TOOL LOCATION c:\program files (x86)\arcgis\desktop10.7\ArcToolbox\Toolboxes\Data Management Tools.tbx\AddIndex  
 COMMAND ISSUED  
 AddIndex IA\_ACPFFields2019 FBndID FBidx UNIQUE NON\_ASCENDING  
 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 ▶

PHONE  
 VOICE (515) 294-6858  
 ADDRESS  
 TYPE postal  
 DELIVERY POINT 1015 N University Blvd.  
 CITY Ames  
 ADMINISTRATIVE AREA Iowa  
 POSTAL CODE 50011  
 COUNTRY US  
 E-MAIL ADDRESS david.james@ars.usda.gov

[Hide Contact information](#) ▲[Hide Distributor](#) ▲

## DISTRIBUTION FORMAT

VERSION 10.4.1  
 \* NAME File Geodatabase Feature Class

## TRANSFER OPTIONS

ONLINE SOURCE  
 LOCATION none

[Hide Distribution](#) ▲**Fields** ▶

## DETAILS FOR OBJECT IA\_ACPFFields2019 ▶

\* TYPE Feature Class  
 \* ROW COUNT 717938  
 DEFINITION

File geodatabase feature class of field boundaries for individual HUC12 watersheds

## DEFINITION SOURCE

Author

## FIELD OBJECTID ▶

\* ALIAS OBJECTID  
 \* DATA TYPE OID  
 \* WIDTH 4  
 \* PRECISION 0  
 \* SCALE 0

## FIELD DESCRIPTION

Internal feature number.

## DESCRIPTION SOURCE

ESRI

## LIST OF VALUES

VALUE Sequential unique whole numbers that are automatically generated.  
 DESCRIPTION Value  
 ENUMERATED DOMAIN VALUE DEFINITION SOURCE ESRI

## \* DESCRIPTION OF VALUES

Sequential unique whole numbers that are automatically generated.

[Hide Field OBJECTID ▲](#)

## FIELD isAG ►

\* ALIAS isAG  
 \* DATA TYPE SmallInteger  
 \* WIDTH 2  
 \* PRECISION 0  
 \* SCALE 0

## FIELD DESCRIPTION

Designation of agriclutlural 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\_Length ►

\* ALIAS Shape\_Length  
 \* DATA TYPE Double  
 \* WIDTH 8  
 \* PRECISION 0  
 \* SCALE 0

## FIELD DESCRIPTION

Length of feature in internal units.

## DESCRIPTION SOURCE

ESRI

## DESCRIPTION OF VALUES

Positive real numbers that are automatically generated.

[Hide Field Shape\\_Length ▲](#)

## FIELD Shape\_Area ►

\* ALIAS Shape\_Area  
 \* DATA TYPE Double  
 \* WIDTH 8  
 \* 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 FBndID ►

\* ALIAS FBndID  
 \* DATA TYPE String  
 \* WIDTH 255  
 \* 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 Acres ►

\* ALIAS Acres  
 \* DATA TYPE Single  
 \* WIDTH 4  
 \* 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 IA\\_ACPFFields2019 ▲](#)

[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 2020-12-01

ARCGIS METADATA PROPERTIES

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

CREATED IN ARCGIS FOR THE ITEM 2020-12-01 10:03:12  
 LAST MODIFIED IN ARCGIS FOR THE ITEM 2020-12-01 16:31:04

AUTOMATIC UPDATES

HAVE BEEN PERFORMED Yes  
 LAST UPDATE 2020-11-27 13:51:43

[Hide Metadata Details ▲](#)

## Metadata Contacts ►

METADATA 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

CONTACT INFORMATION ►

PHONE  
 VOICE (515) 294-6858

ADDRESS

TYPE postal  
 DELIVERY POINT 1015 N University Blvd.  
 CITY Ames  
 ADMINISTRATIVE AREA Iowa  
 POSTAL CODE 50011  
 COUNTRY US  
 E-MAIL ADDRESS david.james@ars.usda.gov

[Hide Contact information ▲](#)

[Hide Metadata Contacts ▲](#)

**Metadata Maintenance ►**

## MAINTENANCE

DATE OF NEXT UPDATE 2021-04-01 00:00:00  
UPDATE FREQUENCY annually

[Hide Metadata Maintenance ▲](#)

**Metadata Constraints ►**

## SECURITY CONSTRAINTS

CLASSIFICATION unclassified  
CLASSIFICATION SYSTEM None

## ADDITIONAL RESTRICTIONS

None

[Hide Metadata Constraints ▲](#)

**FGDC Metadata (read-only) ▼**