ACPF Field Boundary Dataset: Minnesota

File Geodatabase Feature Class

Thumbnail Not Available

Tags

United States Department of Agriculture (USDA), USDA/ARS, Agricultural Conservation Planning Framework, ACPF, Minnesota, 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 has been extensively edited to reflect crop-specific land use consistent with 2015 land cover as derived from 2015 NASS Crop Data Layer datasets and 2015 aerial photography, and no longer reflects discrete ownership patterns.

The ACPF field boundaries feature class incorporates two additonal resources that form the Minnesota ACPF Land Use database. The Minnesota ACPF Fields Crop History table holds the dominant land use class, derived from the NASS CDL, for individual fields from 2010 to 2019. The Minnesota ACPF Land Use table hold summary land use information for individual fields for 2014 to 2019 including an assigned General Land Use (GenLU) that respesent the cropping system over thar 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 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

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

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Extent

West -97.233544 **East** -90.873010
North 49.005646 **South** 43.415541

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 Minnesota, MN

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: Minnesota
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 MN_ACPFfields2019
* LOCATION file://\\ARSIAAMN4-216C\E$\Data\ACPF\ACPF2019\AgDataCmns_contributions\MN_fieldBoundaries.gdb
  * ACCESS PROTOCOL Local Area Network

Hide Resource Details ▲

Extents ►

EXTENT
DESCRIPTION
Minnesota

GEOGRAPHIC EXTENT
BOUNDING RECTANGLE
EXTENT TYPE Extent used for searching
* WEST LONGITUDE -97.233544
* EAST LONGITUDE -90.873010
* NORTH LATITUDE 49.005646
* SOUTH LATITUDE 43.415541
* EXTENT CONTAINS THE RESOURCE Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM
* WEST LONGITUDE -91386.512700
* EAST LONGITUDE 380178.244600
* SOUTH LATITUDE 2278547.768600
* NORTH LATITUDE 2888842.207800
* 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
LIMITATIONS OF USE
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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 10000
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 MN_ACPFfields2019
* OBJECT TYPE composite
* OBJECT COUNT 673864

Hide Vector ▲

ARCGIS FEATURE CLASS PROPERTIES ►
FEATURE CLASS NAME MN_ACPFfields2019
* FEATURE TYPE Simple
* GEOMETRY TYPE Polygon
* HAS TOPOLOGY FALSE
* FEATURE COUNT 673864
* 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 15:16:48
TOOL LOCATION c:\program files (x86)\arcgis\desktop10.7\ArcToolbox\Toolboxes\Data Management Tools.tbx\Append
COMMAND ISSUED

```
Append D:\ACPFproc\ACPF2019\buildFB_HUC8
\ACPF2019_State_Fields.gdb\mn04;D:\ACPFproc\ACPF2019\buildFB_HUC8
\ACPF2019_State_Fields.gdb\mn07;D:\ACPFproc\ACPF2019\buildFB_HUC8
\ACPF2019_State_Fields.gdb\mn09 D:\ACPFproc\ACPF2019\buildFB_HUC8
\ACPF2019_State_Fields.gdb\MN_ACPFfields2019 TEST # #
```

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

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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 MN_ACPFfields2019 ►
* TYPE Feature Class
* ROW COUNT 673864
DEFINITION
File geodatabase feature class of field boundaries for individual HUC12 watersheds

DEFINITION SOURCE
Author

FIELD OBJECTID ►
* ALIAS FID
* 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 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_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 MN_ACPFfields2019 ▲

Hide Fields ▲

Metadata Details ►

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

METADATA IDENTIFIER E58E2A27-9E7E-418E-B8AC-7B8BA42EF08A

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

* LAST UPDATE 2020-12-14

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 2020-12-11 14:40:51
LAST MODIFIED IN ARCGIS FOR THE ITEM 2020-12-14 11:49:49

AUTOMATIC UPDATES
HAVE BEEN PERFORMED Yes
LAST UPDATE 2020-12-11 14:59:45

Hide Metadata Details ▲

Metadata Contacts ►

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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) ▼