



United States Department of Agriculture

Farmland Protection Policy Act (FPPA): Program Overview and NRCS Responsibilities



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Topics to be addressed

- **Brief history of FPPA**
- **Where does it apply?**
- **Requirements and “who does what?”**
- **Land evaluation / site assessment (LESA)**
- **Reporting requirements (CPA-2)**
- **Questions**





Farmland Protection Policy Act (FPPA)

- **Passed by Congress in 1981 (7 USC 4201 and 7 CFR Ch. VI Part 658)**
- **Purposes:**
 - **Minimize federally-aided conversion of farmland**
 - **Funders consider alternative actions**
 - **Assure that federal programs are compatible with state and local programs to protect farmland.**



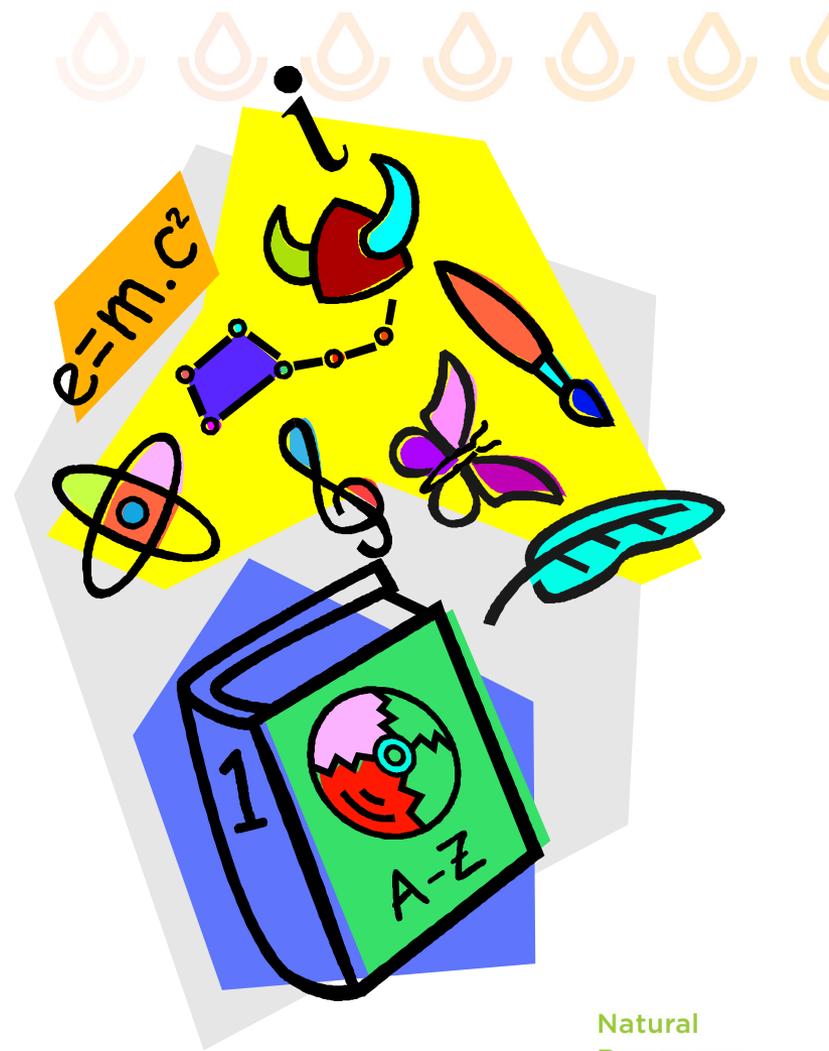


How does one “comply with FPPA”?

- FPPA applies if an **activity** meets these conditions:
 - **Federal funds** are involved
 - **Irreversible conversion** of prime, unique or important farmland to non-agricultural use
 - None of the **exemptions** to FPPA apply
- If FPPA applies, then form (AD-1006 or CPA-106) required



Key terms and concepts



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Activity



- **Any action taken that affects farmland**
- **Examples**
 - **Building a housing development**
 - **Building (or widening) a road**
 - **Expanding an airport**
 - **Expanding a sewage treatment plant**
 - **Developing a municipal landfill**
 - **Etc...**





Federal funds

- Money spent by a federal agency on the activity
- Can be any agency (including NRCS)
- Most common agencies in FY2019
 - Rural Development (USDA-RD)
 - Housing and Urban Development (HUD)
 - Department of Transportation (DOT)





Important Farmlands

- **Prime farmlands**
 - Including prime with modifiers
- **Unique farmlands**
- **State and locally important farmlands**



Defined in (7 CFR § 657)





Irreversible conversion



- Land no longer usable for agriculture
- Conversion is “permanent”
 - Nothing lasts forever, but ...
 - Land cannot be “restored” at all or at least not without significant time and expense.
- **NOT AN NRCS DECISION**
 - Funding agency makes the call
 - NRCS CAN (but is not required to) provide input/advice





Exemptions (land)



- Land already “developed” or already irreversibly converted
 - US Census urban areas maps
 - Existing “footprint” including right-of-ways
- Land already committed to urban development
- Land committed to water storage





Exemptions (activities)



- **Construction of non-farm structures necessary to support ongoing farm operations**
 - **Barns, manure storage lagoons, access roads, etc.**
 - **Virtually all NRCS activities fall under this exemption**
- **Construction / land development for national defense purposes**





Federal agency requirements

- Follow the directions!
- The federal agency **must** submit:
 - One original copy of the form (AD-1006 or NRCS – CPA – 106) to NRCS
 - Parts I and III **must** be completed
 - Must include “appropriately scaled maps” indicating the location of the project site(s)
- Fill out parts VI and VII and return final form to NRCS (after NRCS determination)
- Electronic correspondence is permissible (and usually preferred)





NRCS requirements



- Determine whether FPPA applies
- If FPPA applies – NRCS will complete parts II, IV and V of the form
- Return the form to the applicant and keep a copy for the record
- Response time requirements:
 - 10 working days (if standard)
 - 30 working days if site visit needed or no LE (must inform applicant)





What else?



- **Which form?**
 - AD-1006 is default
 - NRCS-CPA-106 for corridor projects
- **Official data sources**
 - SSURGO data (WSS) for prime and unique farmland
 - eFOTG for farmland of state and local importance
 - Many states have this as GIS layer
 - Generally, but not always, included in SSURGO
 - State and local is only “legit” if certified by STC
 - State or Local Land Evaluation (LE) values





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The AD-1006

aka THE FORM



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PART VI (To be completed by Federal Agency) Site Assessment Criteria <i>(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)</i>		Maximum Points	Site A	Site B	Site C	Site D
1. Area In Non-urban Use		(15)				
2. Perimeter In Non-urban Use		(10)				
3. Percent Of Site Being Farmed		(20)				
4. Protection Provided By State and Local Government		(20)				
5. Distance From Urban Built-up Area		(15)				
6. Distance To Urban Support Services		(15)				
7. Size Of Present Farm Unit Compared To Average		(10)				
8. Creation Of Non-farmable Farmland		(10)				
9. Availability Of Farm Support Services		(5)				
10. On-Farm Investments		(20)				
11. Effects Of Conversion On Farm Support Services		(10)				
12. Compatibility With Existing Agricultural Use		(10)				
TOTAL SITE ASSESSMENT POINTS		160	0	0	0	0
PART VII (To be completed by Federal Agency)						
Relative Value Of Farmland <i>(From Part V)</i>		100	0	0	0	0
Total Site Assessment <i>(From Part VI above or local site assessment)</i>		160	0	0	0	0
TOTAL POINTS (Total of above 2 lines)		260	0	0	0	0
Site Selected:	Date Of Selection	Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>				
Reason For Selection:						
Name of Federal agency representative completing this form:					Date:	

(See Instructions on reverse side)



Details for Part II



- Farmable land: LCC Class 1-4
- Use local if exists

- Use National Ag Census
- Can be state or county basis (be consistent)

PART II (To be completed by NRCS)		Date Request Received By NRCS		Person Completing Form:	
Does the site contain Prime, Unique, Statewide or Local Important Farmland? <i>(If no, the FPPA does not apply - do not complete additional parts of this form)</i>		YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	Acres Irrigated	Average Farm Size
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %	Amount of Farmland As Defined in FPPA Acres: %			
Name of Land Evaluation System Used	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS			

- Default: based on normalized NCCPI
- Use legacy system if available

- Prime, unique, STC-approved state/local importance



The screenshot shows a web browser window with the URL nass.usda.gov/Publications/AgCensus/2017/Full_Report/Census_by_State/index.php. The page header includes the USDA logo, the text "United States Department of Agriculture National Agricultural Statistics Service", and social media icons for Twitter, YouTube, RSS, and Facebook. A search bar labeled "Search NASS" is also present. The main navigation menu includes links for "Data & Statistics", "Publications", "Newsroom", "Surveys", "Census", "About NASS", "Contact Us", and "Help". Below the navigation, a breadcrumb trail reads "You are here: Home / Publications / AgCensus / 2017 / Full Report / Census by State". A "Quick links for Census of Ag" sidebar contains links for "Partner Tools" and "Frequently Asked Questions / More Information". The main content area features a "Census of Agriculture" heading and a prominent "2017 Census by State" link.

- **National Ag Census data (latest 2017) is available on the web**
- **Many states have created a stand-alone database or spreadsheet of relevant data for FPPA use and reference**





Details for Part IV and V

- From WSS and Part III
- State/local caveat



PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide Important or Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)				



- Default: LE based on normalized NCCPI
- Use legacy system if available
- Use weighted average for multiple LE





What is a “LESA system” anyway?

- Framework to assess the relative affect of conversion of a specific parcel
- Land Evaluation (LE)
 - Relative rating (0-100) of map units in a political jurisdiction
 - Typically county-based
 - Independent of current land use
- Site assessment (SA)
 - Specific piece of land and point in time
 - Criteria in final rule (7CFR658)
- **NRCS is responsible for LE**





What about my LE?



- A LESA system (aka LE ratings) may already exist and simply need to be updated
- May be for a county or an entire state
- Some states put in significant time and effort to develop multi-criteria-based systems (mid-late 80s usually)
- **BUT: is that system still appropriate and usable?**
 - Updated soil mapping / underlying soils data
 - Do other criteria used still apply?





LE Development Process (full meal deal)

- Soils of an area, such as a county, are evaluated basis of their relative productivity for crops grown locally
- Land capability classifications are considered
- Important farmland maps are considered
- Soils within the local government jurisdiction are examined and given a relative value score from 1 to 100 points
- Information is concurred by the STC and published in Section II of the eFOTG





What if I don't have a legacy LE (or don't think it is appropriate)?

- Normalized National Crop Productivity Index (NCCPI) is national default
- Or use a widely accepted local crop productivity index (e.g. Iowa Corn Suitability Index)
- Be consistent – if you use one method for one county, use it for all counties
- You are welcome to work with your local partners to develop and document a more nuanced LE (**this is NOT required**)
- Assistance is available – just ask



What about SA?

- **Site Assessment (SA) is time and parcel specific**
- **SA completed by the submitting agency**
- **Assessment criteria are spelled out in 7 CFR 658.5(b)**
- **Criteria are also included in the FPPA handbook**
 - <http://www.itc.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/fppa>





Site Assessment Criteria

- “Laundry List” of site-related criteria that affect the viability of farming operations
- Range of points are assigned to each criterion
- Minor differences in criteria used for corridor projects
- Some jurisdictions have developed and published more detailed criteria for site assessment points
- Points are documented and tabulated in Section VI



Site Assessment (SA) guidance

(b) Site Assessment Criteria. Federal agencies are to use the following criteria to assess the suitability of each proposed site or design alternative for protection as farmland along with the score from the land evaluation criterion described in Sec. 658.5(a). Each criterion will be given a score on a scale of 0 to the maximum points shown. Conditions suggesting top, intermediate and bottom scores are indicated for each criterion. The agency would make scoring decisions in the context of each proposed site or alternative action by examining the site, the surrounding area, and the programs and policies of the State or local unit of government in which the site is located. Where one given location has more than one design alternative, each design should be considered as an alternative site. The site assessment criteria are:

- (1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?
 - More than 90 percent - 15 points
 - 90 to 20 percent - 14 to 1 point(s)
 - Less than 20 percent - 0 points
- (2) How much of the perimeter of the site borders on land in nonurban use?
 - More than 90 percent - 10 points
 - 90 to 20 percent - 9 to 1 point(s)
 - Less than 20 percent - 0 points
- (3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than 5 of the last 10 years?
 - More than 90 percent - 20 points
 - 90 to 20 percent - 19 to 1 point(s)
 - Less than 20 percent - 0 points
- (4) Is the site subject to State or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?



Final Notes

- Total points (Part VII) for a proposed site is the sum of the values from Part V (LE) and Part VI (SA)
 - 160 is designated as the “affect threshold” above which alternatives should be considered
- NRCS provides information; not direction
- Ask that the form be returned when a decision is made
- FPPA is not regulatory (explicitly stated in the statute)





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Annual Reporting (CPA-2 and Beyond)



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Annual Reporting



- The FPPA statute specifies that NRCS will provide an annual report to Congress
- The Congressional reporting requirement was administratively eliminated in 2015
 - BUT: the statute was not amended
- We (NRCS) are still required to publicly report FPPA activity on a fiscal year basis
- Official reporting form is the CPA-2
- National Bulletin out now ending on Friday, November 6th



EVALUATING IMPLEMENTATION OF THE FARMLAND PROTECTION ACT (FPPA)

STATE: _____ Fiscal Year: _____
 Person Completing Report: _____

Federal Agency Reporting	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII
	NRCS	HUD	FHWA	FEMA	RD	EPA	FAA	OSM	RUS	DE	HRSA	VA	EDA	DOT			
A. AD-1006 and CPA-106 requests received																	
B. AD-1006 and CPA-106 forms completed																	
C. AD-1006 and CPA-106 returned by agency																	
D. Farmland Conversions:																	
1. Total land - acres proposed																	
Total land - acres converted																	
2. Total important farmland - acres proposed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total important farmland - acres converted	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3. Prime and Unique farmland - acres proposed																	
Prime and Unique farmland - acres converted																	
4. State and Local farmland - acres proposed																	
State and Local farmland - acres converted																	
5. Average weighted relative value proposed																	
Average weighted relative value converted																	
E. Corridors evaluated (number)																	
F. Proposals with at least one alternative to number proposed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G. Sites where local LESA was available	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H. Sites where a local LESA was used for evaluation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
I. LESA systems on State Conservation Systems																	
J. Land evaluation systems developed (total)																	
K. Narrative Report (Comments)																	

A. AD-1006 and CPA-106 request received
 B. AD 1006 and CPA-106 forms completed

D.1. Total land-acres proposed
Total land-acres converted

D.2. Total important farmland-acres proposed
Total important farmland-acres converted

D.3. Prime and unique farmland-acres proposed
Prime and unique farmland-acres converted

D.4. State and local farmland-acres proposed
State and local farmland-acres converted

- | | | | |
|------|-------------------------------------|-------|--|
| FHWA | Federal Highway Administration | RUS | Rural Utilities Service |
| FEMA | Federal Emergency Management Agency | DE | Department of Energy |
| RD | Rural Development | EDA | Economic Development Agency |
| EPA | Environmental Protection Agency | HRSA | Health Resources and Services Administration |
| DOT | Department of Transportation | VA | Veterans Administration |
| ARS | Agricultural Research Service | USACE | Army Corps of Engineers |
| BIA | Bureau of Indian Affairs | BLM | Bureau of Land Management |
| BOP | Bureau of Prisons | BOR | Bureau of Reclamation |
| CBP | Customs and Border Protection | DOA | Department of Army |



FPPA Tool development

- Started the effort with a National Bulletin, [310-20-2 LNU Solicitation State-Level FPPA Processing and Reporting Tools to Inform National Level Tool Development](#)
- OK, TX, MN, WI, WV, and VT responded with tools using ArcGIS, Microsoft Forms, Excel and Access
- Ongoing Process working with State Soil Scientists from these State and staff under the National Soil Scientist
- We appreciate your feedback as you are the primary audience for this tool – please email John Andreoni, john.andreoni@usda.gov, with feedback or if you're willing to have a short conversation.





Other Issues and Questions





Issues not mentioned in the statute or rules

- Conversion of prime farmland to non-prime farmland
- Non-permanent conversion - aka How long is “irreversible”?
- How long determinations are valid – is there an “expiration date”?
- Minimum size requirements
- Prime and unique range and forest land and range and forest land of state and local importance



Brief note on NRCS Activities

- NRCS activities (including CTA) are subject to the provisions of FPPA
- Virtually all NRCS activities are exempt from FPPA under the “supports existing agricultural use” exemption
- FPPA is included in the CPA-52
- FPPA could (in theory) apply to some easements but only under very unique circumstances





State Requirements



- **Must have a designated lead FPPA contact (usually the SSS or Assistant SSS)**
- **Must develop and implement a procedure to address FPPA requests in compliance with statutory timelines**
 - **Can be at the state, area and/or local level**
- **Must develop, maintain, and make publicly available an LE system (or systems) – official location is the eFOTG, Section II**
- **Must report annually via the CPA-2**





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Resources and Assistance



(you are NOT on your own)



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Land Use

- Cropland**
 - Farmland Protection Policy Act**
- Forestry**
- Range & Pasture**

FPPA Forms and Resources

- Farmland Protection Policy Act Manual
- Farmland Protection Policy Act, Public Law
- FPPA Rule, 7 CFR 658
- Farmland Conversion Impact Rating (Form AD-1006)
- Farmland Conversion Impact Rating, Corridors (Form NRCS-CPA-106)
- Evaluating Implementation of the Farmland Protection Act (FPPA) Annual Report (for NRCS use only), NRCS-CPA-2

Annual Reports

- Farmland Protection Policy Act 2011 Annual Report [🔗](#)
- Farmland Protection Policy Act 2010 Annual Report [🔗](#)
- Farmland Protection Policy Act 2009 Annual Report [🔗](#)
- Farmland Protection Policy Act 2008 Annual Report [🔗](#)
- Farmland Protection Policy Act 2007 Annual Report [🔗](#)
- Farmland Protection Policy Act 2006 Annual Report [🔗](#)

Farmland Protection Policy Act

Background



The National Agricultural Land Study of 1980-81 found that millions of acres of farmland were being converted in the United States each year. The 1981 Congressional report, Compact Cities: Energy-Saving Strategies for the Eighties, identified the need for Congress to implement programs and policies to protect farmland and combat urban sprawl and the waste of energy and resources that accompanies sprawling development.

The Compact Cities report indicated that much of the sprawl was the result of programs funded by the Federal Government. With this in mind, Congress passed the Agriculture and Food Act of 1981 (Public Law 97-98)

containing the Farmland Protection Policy Act (FPPA) subtitle I of Title XV, Section 1539-1549. The final rules and regulations were published in the Federal Register on June 17, 1994.

Purpose

The FPPA is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that to the extent possible federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every two years.

The FPPA does not authorize the Federal Government to regulate the use of private or nonfederal land or, in any way, affect the property rights of owners.

For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land.

Projects and Activities

Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a Federal agency or with assistance from a Federal agency.





Other resources



- **FPPA Manual**
 - Title 310, Part 523 (NRCS eDirectives)
 - Under review in FY2021
 - Goal: publish by the end of the FY
 - Reviewer assistance is welcome
- **FPPA National Program Manager**
 - Michael Robotham, National Soil Scientist
 - Michael.Robotham@usda.gov, 202-720-5547, Skype or Teams
 - Don't hesitate to ask questions!



A tropical beach scene with a rainbow over a mountain range. The foreground shows a sandy beach and turquoise water. In the background, there are lush green mountains under a cloudy sky. A vibrant rainbow arches across the sky, starting from the left side of the frame and ending near the center. The word "Questions?" is written in a large, bold, black font in the upper right quadrant of the image.

Questions?



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Extra slides



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Normalized LE Development

- Using Web Soil Survey, set AOI to county
- Go to the Soil Data Explorer tab
- Under the **Land Classification** tab (NCCPI) or the **Vegetative Productivity** tab (e.g. Iowa Corn Suitability Index), select the appropriate report and view the rating
- Highlight the table, copy and paste it into EXCEL



Search

Suitabilities and Limitations Ratings

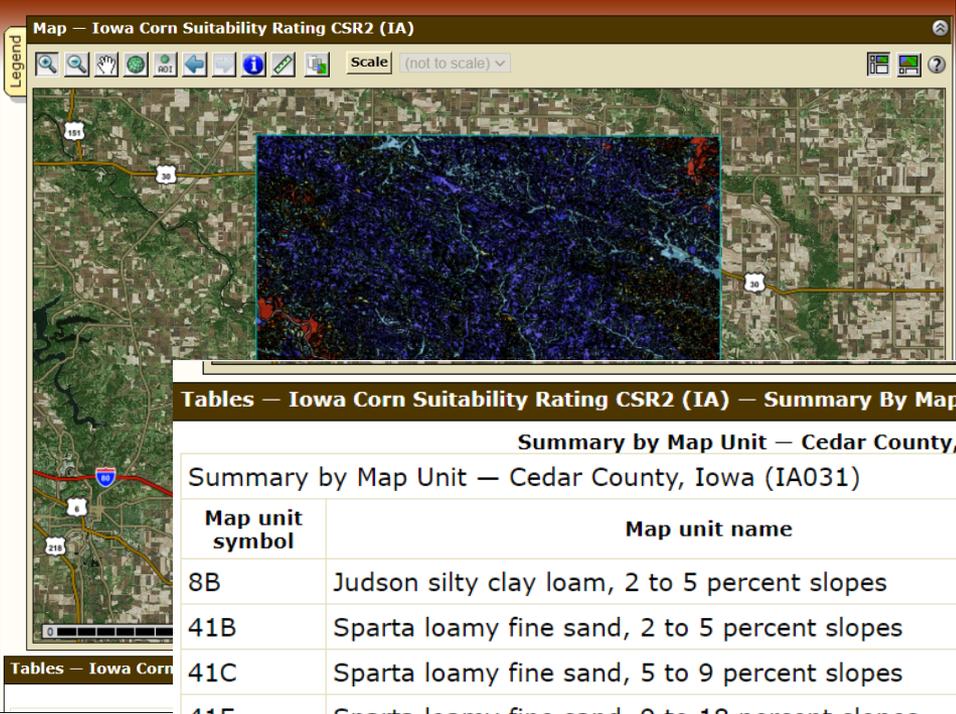
Open All Close All

- Building Site Development
- Construction Materials
- Disaster Recovery Planning
- Land Classifications
- Land Management
- Military Operations
- Recreational Development
- Sanitary Facilities
- Soil Health
- Vegetative Productivity**
- Crop Productivity Index
- Forest Productivity (Cubic Feet per Acre per Year)
- Forest Productivity (Tree Site Index)
- Iowa Corn Suitability Rating CSR2 (IA)**

View Description View Rating

View Options

- Map
- Table
- Description of Rating
- Rating Options



Tables — Iowa Corn Suitability Rating CSR2 (IA) — Summary By Map Unit

Summary by Map Unit — Cedar County, Iowa (IA031)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
8B	Judson silty clay loam, 2 to 5 percent slopes	94	1,615.0	0.4%
41B	Sparta loamy fine sand, 2 to 5 percent slopes	39	381.3	0.1%
41C	Sparta loamy fine sand, 5 to 9 percent slopes	34	501.3	0.1%
41E	Sparta loamy fine sand, 9 to 18 percent slopes	6	250.3	0.1%
63B	Chelsea loamy fine sand, 2 to 5 percent slopes	19	521.8	0.1%
63C	Chelsea loamy fine sand, 5 to 9 percent slopes	14	1,213.1	0.3%
63E	Chelsea loamy fine sand, 9 to 18 percent slopes	5	1,086.6	0.3%
65D2	Lindley loam, 9 to 14 percent slopes, moderately eroded	43	583.7	0.2%
65E2	Lindley loam, 14 to 18 percent slopes, moderately eroded	31	1,140.5	0.3%
65F2	Lindley loam, 18 to 25 percent slopes, moderately eroded	10	423.4	0.1%
83B	Kenyon loam, 2 to 5 percent slopes	90	1,626.8	0.4%
83C	Kenyon loam, 5 to 9 percent slopes	85	574.4	0.2%
83C2	Kenyon loam, 5 to 9 percent slopes, eroded	84	984.3	0.3%
88	Nevin silty clay loam, 0 to 2 percent slopes, rarely flooded	94	545.7	0.1%
110C	Lamont fine sandy loam, 2 to 9 percent slopes	47	398.9	0.1%
110E	Lamont fine sandy loam, 9 to 18 percent slopes	16	419.0	0.1%
118	Garwin silty clay loam, 0 to 2 percent slopes	90	3,170.4	0.9%



Normalize from 0-100 for the jurisdiction (LE is “relative”)

Microsoft Excel interface showing a spreadsheet with columns A through G. The formula bar displays $= (E2/0.88) * 100$. The spreadsheet data is as follows:

	A	B	C	D	E	F	G
	Map_Symbol	Map_Unit_Name	Map_Unit_Acres	Non-irr_LCC	Corn_Index	INDEX	
2	30214	Vigar loam, 2 to 5 percent slopes, rarely flooded	4937	2e	0.88	100	
3	36018	Kennebec and Fatima soils, 0 to 2 percent slopes, frequently flooded	8	3w	0.87	99	
4	36031	Nodaway silt loam, 0 to 2 percent slopes, frequently flooded	152	3w	0.86	98	
5	36050	Zook silty clay loam, 0 to 2 percent slopes, occasionally flooded	81	2w	0.85	97	
6	36042	Vesser silt loam, 0 to 2 percent slopes, occasionally flooded	17324	3w	0.81	92	
7	56008	Zook silty clay loam, overwash, 0 to 2 percent slopes, occasionally flo	6806	2w	0.8	91	
8	64033	Vigar-Zook-Excello complex, 0 to 5 percent slopes	4384	3w	0.7985	91	
9	30217	Vigar-Zook-Nodaway complex, 1 to 5 percent slopes	152	4w	0.784	89	
10	36064	Floris silt loam, 0 to 2 percent slopes, occasionally flooded	407	2w	0.75	85	
11	66081	Dockery and Tice silt loams, 0 to 2 percent slopes, occasionally floode	16420	2w	0.7255	82	
12	36025	Landes loam, 0 to 2 percent slopes, frequently flooded	136	3w	0.7	80	
13	30057	Gara loam, 14 to 20 percent slopes	488	6e	0.69	78	
14	54000	Chariton silt loam, 0 to 2 percent slopes, rarely flooded	230	3w	0.69	78	
15	36015	Floris loam, 0 to 2 percent slopes, frequently flooded	3577	3w	0.68	77	
16	13505	Blackoar silt loam, 0 to 2 percent slopes, occasionally flooded	202	2w	0.67	76	
17	36003	Arbela silt loam, 0 to 2 percent slopes, occasionally flooded	29	3w	0.66	75	
18	36062	Arbela silty clay loam, 0 to 2 percent slopes, occasionally flooded	3565	3w	0.61	69	
19	60106	Gifford silty clay loam, 2 to 5 percent slopes	467	3e	0.61	69	
20	66075	Chequest silty clay loam, 0 to 2 percent slopes, occasionally flooded	49	3w	0.59	67	
21	60061	Bevier silty clay loam, 3 to 8 percent slopes	5706	3e	0.57	65	
22	30106	Kilwinning silt loam, 1 to 5 percent slopes	7	3e	0.56	64	
23	50001	Armstrong loam, 5 to 9 percent slopes, eroded	63203	3e	0.55	63	
24	30175	Pershing silty clay loam, 2 to 5 percent slopes, eroded	350	3e	0.54	61	
25	30054	Gara clay loam, 9 to 14 percent slopes, eroded	135	4e	0.53	60	
26	66109	Wabash silty clay loam, 0 to 2 percent slopes, overwash, occasionally	1647	3w	0.52	59	
27	60107	Gifford silty clay loam, 5 to 9 percent slopes, eroded	1940	3e	0.51	58	
28	50012	Putnam silt loam, 0 to 1 percent slopes	1851	3w	0.5	57	
29	30058	Gara loam, 14 to 20 percent slopes, eroded	657	6e	0.5	57	