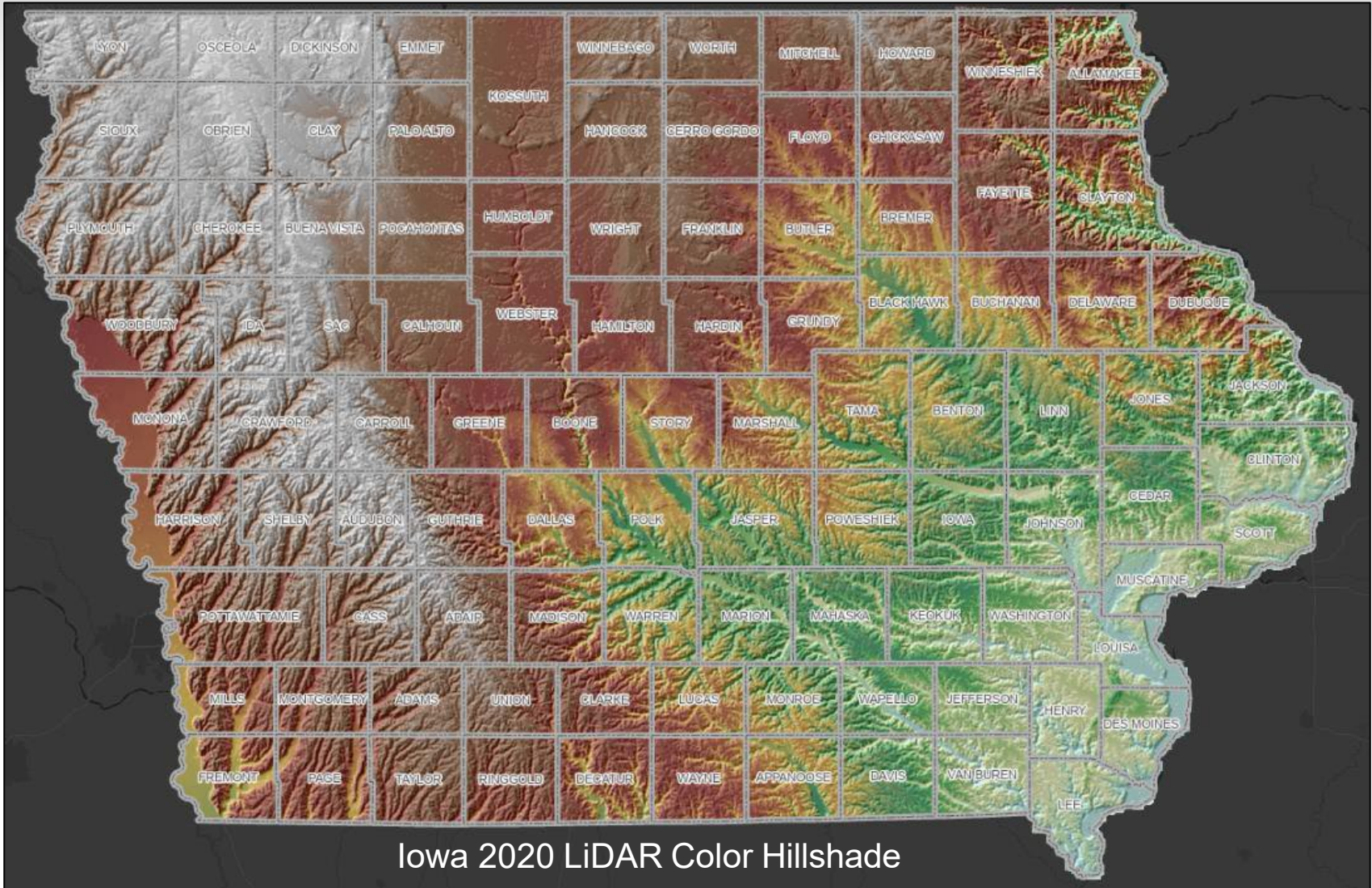
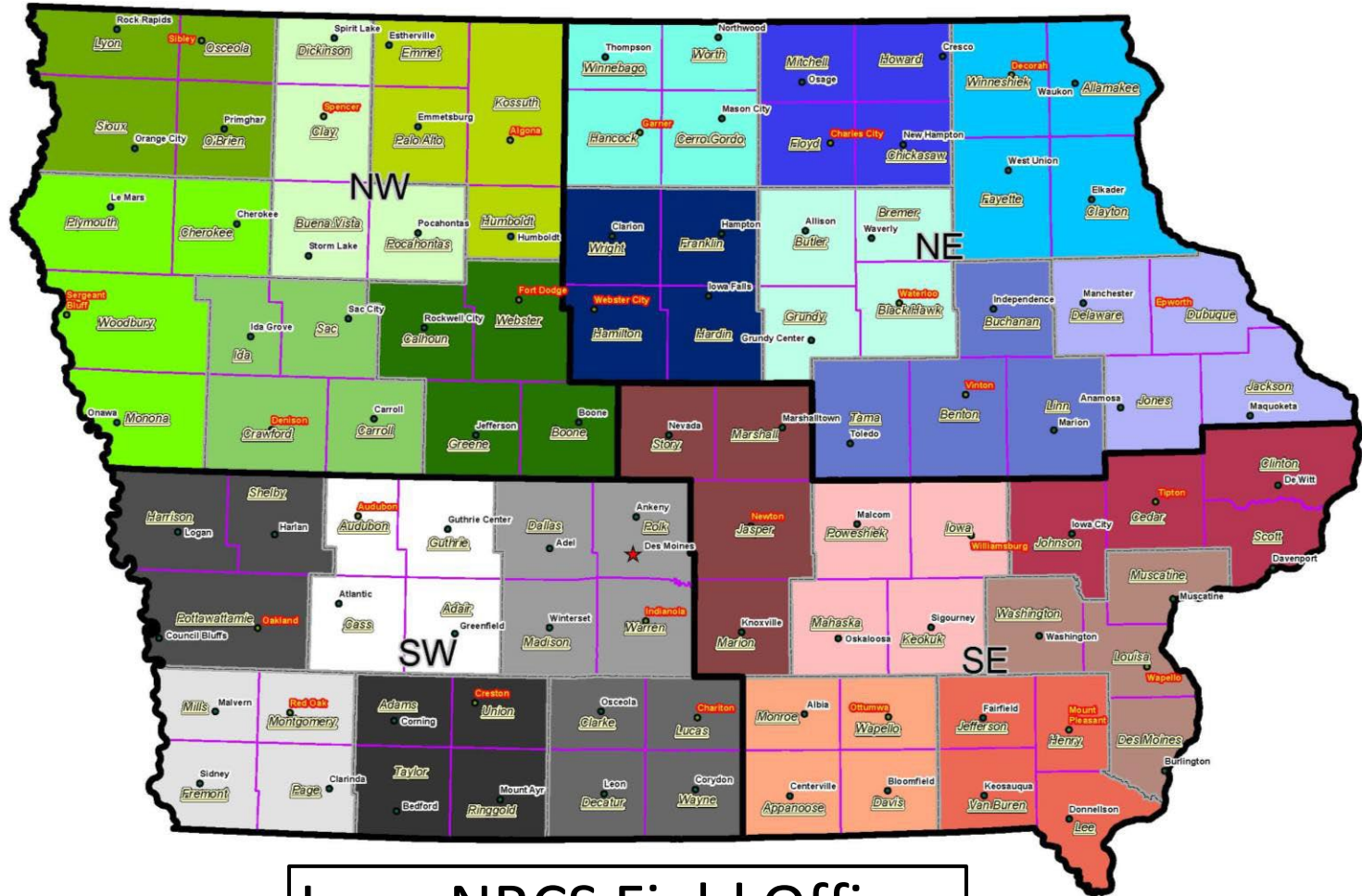


Iowa State Specific Training Module





Iowa NRCS Field Offices

Iowa NRCS Structure

- Service Center
- Area
- Resource Team
- County
- ★ State Office
- RT Resource Team Office

USDA-NRCS
Des Moines, Iowa
2/12/2020

United States Department of Agriculture
Natural Resources Conservation Service

Iowa TSP Coordinator Contacts

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Purpose of this Module

- This module will provide general information for TSPs to conduct conservation planning in Iowa.
- This information is general so the TSP may need to follow up with additional reading or training to make sure they have the knowledge, skill, licenses and certifications to conduct conservation planning in Iowa.

NRCS TSP Websites

- Technical Service Provider section for more information: [Iowa Technical Service Providers \(TSP\) | Natural Resources Conservation Service \(usda.gov\)](#)
- National NRCS TSP website: [Technical Service Providers | Natural Resources Conservation Service \(usda.gov\)](#)
- Iowa NRCS website: [Iowa | Natural Resources Conservation Service \(usda.gov\)](#)

Review of State of Iowa Laws

- The Iowa Department of Natural Resources (DNR) and the U.S. Environmental Protection Agency (EPA) Region 7 work together to implement the National Pollutant Discharge Elimination System (NPDES) Program within Iowa.
- A Comprehensive Nutrient Management Plan for a regulated Concentrated Animal Feeding Operation (CAFO) will need to meet Iowa CAFO regulations in addition to NRCS standards.
- For additional information see the Iowa DNR website at: [Animal Feeding Operations, Iowa DNR](#)

Review of State Laws

- The Iowa Manure Management Action Group (IMMAG) website [Iowa Manure Management Action Group \(iastate.edu\)](http://iastate.edu) maintained by Iowa State University Extension and Outreach provides a single source for information about Iowa regulations, resources, and news concerning manure management.

Review of State Laws

Iowa Code 2023

CHAPTER 542B

PROFESSIONAL ENGINEERS AND LAND SURVEYORS

542B.1 Licensed professional engineers and surveyors.

A person shall not engage in the practice of engineering or land surveying in the state unless the person is a licensed professional engineer or a licensed professional land surveyor as provided in this chapter, except as permitted by section 542B.26.

[C24, 27, 31, 35, 39, §**1854**; C46, 50, 54, 58, 62, 66, 71, 73, 75, 77, 79, 81, §114.1]

C93, §542B.1

95 Acts, ch 65, §1; 96 Acts, ch 1055, §4; 2012 Acts, ch 1009, §10

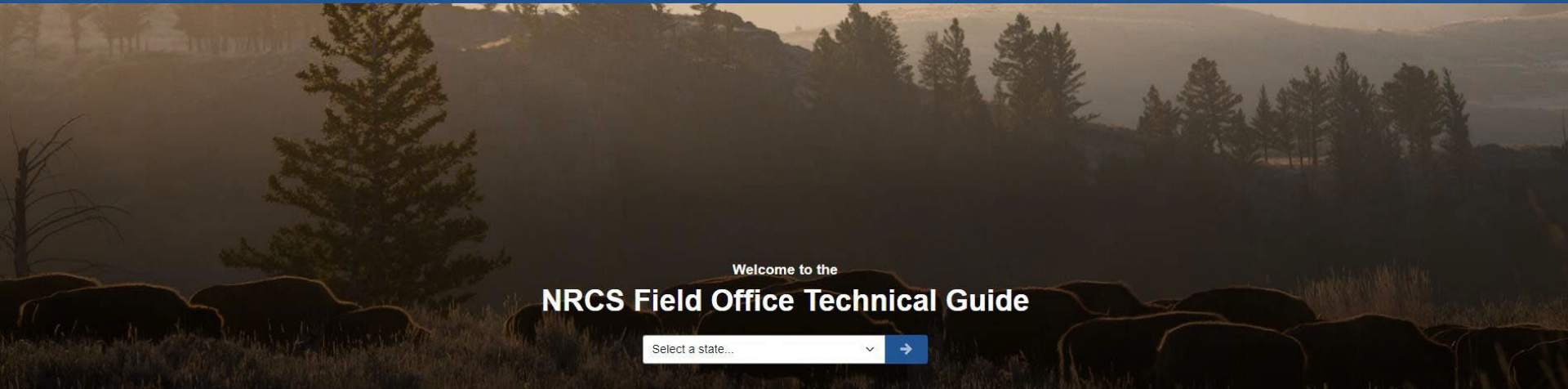
Iowa NRCS Engineering

Iowa NRCS Engineering information can be found on the following website: [Iowa NRCS Engineering | Natural Resources Conservation Service \(usda.gov\)](https://www.usda.gov/nrcs/iowa-engineering)

Information found on this site:

- Engineering Manual
- Handbooks- Part 650 - Engineering Field Handbook, Part 651 - Agricultural Waste Management Field Handbook
- Conservation Practice Standards & Construction Specifications
- Iowa Engineering Fact Sheets
- Computer Aided Drafting (CAD) Drawings and Support
- NRCS Surveying
- Additional Engineering Documents
- Dam Owner Academy Videos from the Association of State Dam Safety Officials (ASDSO)

State-specific Requirements in the Field Office Technical Guide (FOTG)



Welcome to the
NRCS Field Office Technical Guide

Select a state...

About FOTG

Technical guides are the primary scientific references for NRCS. They contain technical information about the conservation of soil, water, air, and related plant and animal resources.

Technical guides used in each field office are localized so that they apply specifically to the geographic area for which they are prepared. These documents are referred to as Field Office Technical Guides (FOTGs).

Appropriate parts of the Field Office Technical Guides are automated as databases, computer programs, and other electronic-based materials such as those included in these web based pages.

FOTG Sections

Section 1 - General Resource References

- General state maps.
- Descriptions of Major Land Resource Areas, watershed information, and links to NRCS reference manuals and handbooks.
- Links to researchers, universities, and agencies we work with.
- Conservation practice costs and agricultural laws and regulations.

Section 2 - Natural and Cultural Resources Information

- Detailed information about soil, water, air, plant, and animal resources.
- Cultural resources and information about protected plant and animal species.
- NRCS Soil Surveys, Hydric Soils Interpretations, Ecological Site Descriptions, Forage Suitability Groups, Cropland Production Tables, Wildlife Habitat Evaluation Guides, Water Quality Guides, and other related information can be found here as it becomes available.

Section 3 - Resource Concerns and Planning Criteria

- NRCS Quality Criteria, which establish standards for resource conditions that help provide sustained use.

Section 4 - Practice Standards and Supporting Documents

- NRCS Conservation Practice Standards that define the practice and where it applies. Practice specifications are detailed requirements for installing the practice in the state.

Section 5 - Conservation Effects

- Background information on how Conservation Practices affect each identified resource concerns in the state.

State-specific Requirements in the Field Office Technical Guide (FOTG)

- Iowa Conservation Practice Standards can be found on the [Iowa | Field Office Technical Guide | NRCS – USDA](#)
- Iowa modifies Conservation Practice Standards to meet local conditions and to take advantage of local technologies and resources.
- Always consult the Iowa Conservation Practice Standard instead of the national standard.
- **Iowa's Conservation Practice Standards are updated regularly. Use the latest version.**

State-specific Requirements in the Field Office Technical Guide (FOTG)

Section 1- General Resource Reference

Section 1 - General Resource References	
Cost Data	∨
Engineering	∨
Erosion prediction	∨
Laws	∨
Maps	∨
Reference List	∨
Resource Evaluation Tools	∨
State Payment Rates and Methods Website	
Technical Notes by Discipline	∨
Transmittals	
Archived - Wetland	∨

State-specific Requirements in the Field Office Technical Guide (FOTG)

Section 2- Natural and Cultural Resources Information

Section 2 - Natural and Cultural Resources Information	^
Climatic Data	∨
Cultural Resources Information	∨
Ecological Site Descriptions	∨
Forestry	
Soils Information	∨
Special Environmental Concerns	
Threatened and Endangered Species	

State-specific Requirements in the Field Office Technical Guide (FOTG)

Section 3: Resource Concerns and Planning Criteria

- Resource concerns, conservation planning criteria, and conservation activities (CPA, DIA, CEMA).

Section 3 - Resource Concerns and Planning Criteria	^
Conservation Activities (CPA,DIA,CEMA)	v
Conservation Activity Plans	v
Conservation Programs	v
Guidance Documents	v
Legislated Programs	v
Resource Concerns and Planning Criteria	
Archives	v

State-specific Requirements in the Field Office Technical Guide (FOTG)

Section 4: Practice Standards and Supporting Documents

- Conservation practice standards, support documents, engineering specifications, and engineering tools.
- Practice standards may have associated supporting documents:
 - Implementation Requirements (IR)
 - Guidance Documents (GD)
 - Statements of Work (SOW)

Section 4 - Practice Standards and Supporting Documents	
Index	
Conservation Practice Standards & Support Documents	▼
Engineering Specifications	▼
Engineering Tools	

State-Specific Requirements in the Field Office Technical Guide (FOTG)

Section 5- Conservation Effects

Section 5 - Conservation Effects	^
Conservation Practice Effects	v
Conservation Practice Physical Effects (CPPE)	

Review of Other Important Resource Issues

Federal Policy

Planners must also be aware of other important resources issues including, but not limited to, the following**:

- Threatened and Endangered Species
- Cultural Resources
- Waters of the U.S.
- Wetlands

Planners must be aware of all NEPA requirements. The NRCS Environmental Evaluation Worksheet (NRCS-CPA-52) is used to address many of these issues.

** These items are not addressed in depth (in this document) due to the complex and rather dynamic nature of policy relating to the issues. The conservation planner must be diligent in adhering to all current policy and laws in these areas when developing conservation plans.

Iowa Department of Natural Resources numbers of state endangered, threatened, and special concern species

77.2(1) Endangered animal species:	# of Species
Mammals	4
Birds	7
Fish	8
Reptiles	8
Amphibians	2
Butterflies	2
Land Snails	7
Fresh Water Mussels	9

77.2(2) Threatened animal species:	# of Species
Mammals	2
Birds	2
Fish	9
Reptiles	7
Amphibians	2
Butterflies	5
Snails	2
Fresh Water Mussels	6

77.2(3) Special concern animal species:	# of Species
Mammals	1
Birds	4
Fish	2
Reptiles	2
Butterflies	25

Visit Iowa Department of Natural Resources for more details regarding Iowa's current endangered, threatened, and special concern species.

[Iowa's Threatened and Endangered Species Program \(iowadnr.gov\)](http://iowadnr.gov)

Iowa federally listed endangered, threatened, and special concern species.

Scientific Name	Common Name	Where Listed	Region	ESA Listing Status	Group
<i>Charadrius melodus</i>	Piping Plover	[Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.	5	Threatened	Birds
<i>Grus americana</i>	Whooping crane	U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY)	2	Experimental Population, Non-Essential	Birds
<i>Lampsilis higginsii</i>	Higgins eye (pearly mussel)	Wherever found	3	Endangered	Clams
<i>Cumberlandia monodonta</i>	Spectaclecase (mussel)	Wherever found	3	Endangered	Clams
<i>Plethobasus cyphus</i>	Sheepnose Mussel	Wherever found	3	Endangered	Clams
<i>Scaphirhynchus albus</i>	Pallid sturgeon	Wherever found	6	Endangered	Fishes
<i>Notropis topeka</i> (=tristis)	Topeka shiner	Wherever found, except where listed as an experimental population	6	Endangered	Fishes

Visit the Fish and Wildlife Service for more details regarding the current Iowa federal endangered, threatened, and special concern species.

[Endangered Species | Species | U.S. Fish & Wildlife Service \(fws.gov\)](https://www.fws.gov/species/endangered-species)

Iowa federally listed endangered, threatened, and special concern species.

Scientific Name	Common Name	Where Listed	Region	ESA Listing Status	Group
<i>Aconitum noveboracense</i>	Northern wild monkshood	Wherever found	3	Threatened	Flowering Plants
<i>Asclepias meadii</i>	Mead's milkweed	Wherever found	3	Threatened	Flowering Plants
<i>Lespedeza leptostachya</i>	Prairie bush-clover	Wherever found	3	Threatened	Flowering Plants
<i>Platanthera leucophaea</i>	Eastern prairie fringed orchid	Wherever found	3	Threatened	Flowering Plants
<i>Platanthera praeclara</i>	Western prairie fringed Orchid	Wherever found	3	Threatened	Flowering Plants
<i>Bombus affinis</i>	Rusty patched bumble bee	Wherever found	3	Endangered	Insects
<i>Myotis sodalis</i>	Indiana bat	Wherever found	3	Endangered	Mammals
<i>Myotis septentrionalis</i>	Northern Long-Eared Bat	Wherever found	3	Endangered	Mammals
<i>Sistrurus catenatus</i>	Eastern Massasauga (=rattlesnake)	Wherever found	3	Threatened	Reptiles
<i>Discus macclintocki</i>	Iowa Pleistocene snail	Wherever found	3	Endangered	Snails

Visit the Fish and Wildlife Service for more details regarding the current Iowa federal endangered, threatened, and special concern species.

[Endangered Species | Species | U.S. Fish & Wildlife Service \(fws.gov\)](https://www.fws.gov/species/endangered-species)

NRCS Cultural Resource National Policies

It is the policy of NRCS to protect cultural resources in situ to the fullest extent possible.



Why do we protect Cultural Resources?

- We are using public funds, even though most practices are on private properties.
- Nonrenewable resources.
- Learn about human history.
- Apply to our future.
- It's the law!

Definitions:

Cultural Resource: More of a catch-all definition

- Historic, aesthetic, and cultural aspects of the human environment.
- Could be archaeological sites, buildings, fence lines, landscapes, artifacts, sacred places, plants, or animals.



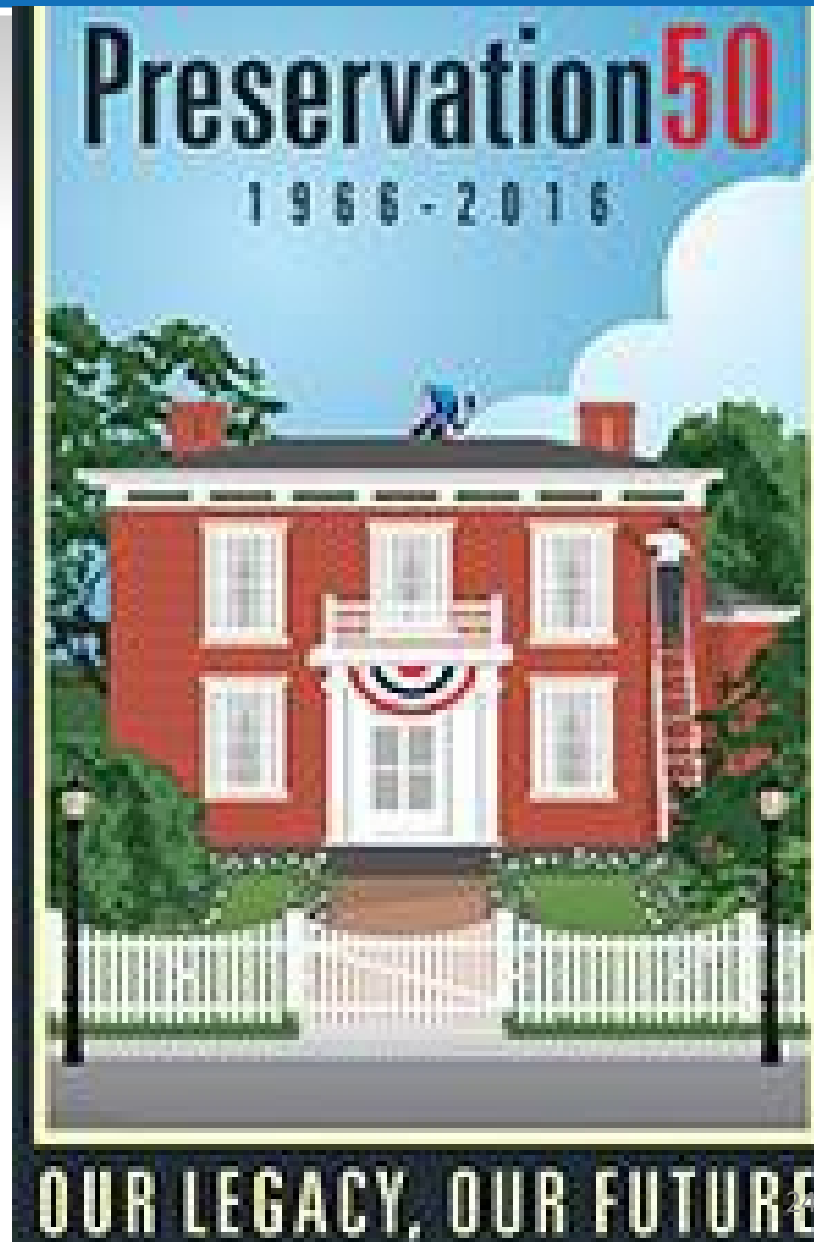
Historic Property: More of a legal definition

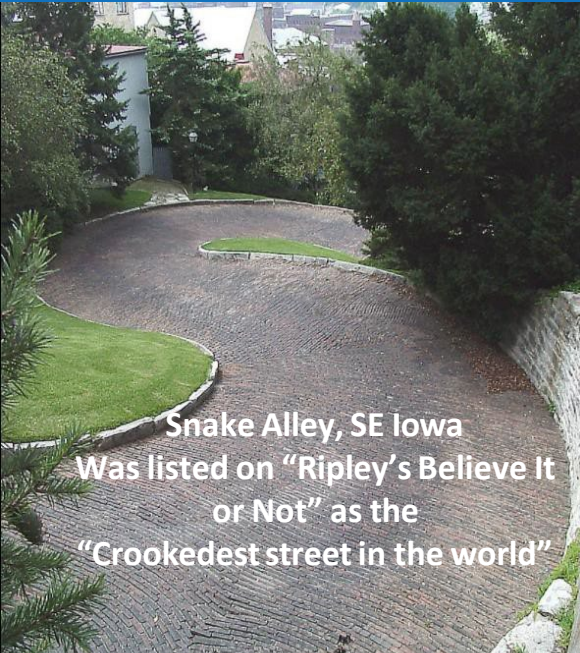
- 50 years or older.
- Any prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in, the National Register of Historic Places.
- Federal agencies must consider impact on these.



National Historic Preservation Act (NHPA)

- 1966
- Passed primarily to acknowledge the importance of protecting our nation's heritage from rampant federal development.
- **Requires Federal agencies to consider the effects of their undertakings on historic properties (Section 106 Process).**
 - Deals only with impacts on properties included in or eligible for the National Register of Historic Places.
 - Districts, sites, buildings, structures, and objects.
 - Does not deal with cultural aspects of the environment or artifacts.





Snake Alley, SE Iowa
Was listed on "Ripley's Believe It or Not" as the
"Crookedest street in the world"



1849 The Post, NE Iowa



East Park Band Shell, NE Iowa



Buxton Mine Townsite, SE Iowa



Polled Hereford Breed Origin
Site, SW Iowa



Great Northern
Locomotive No. 1355,
NW Iowa G.N.

Some examples of Iowa's National Register Sites: Not just pretty buildings

When does NHPA Section 106 apply to Iowa NRCS practices?

Is it a practice with little to no effect on cultural resources?

- See Iowa Appendix A of the Programmatic Agreement (PA).
- FOTG, Iowa, Section 2, Cultural Resources Information.

NRCS is the Lead federal agency when:

- Providing financial assistance.
- Providing designs or certifying practices.
- If we're just offering general technical assistance, it would not apply.



Working on Iowa Farmsteads

- Farmsteads older than 50 years of age are automatically high probability locations.
- Complex human activity – above and below ground are taken into consideration.
- Building locations and activities may change through time.
- Use aerial photos, Beacon, Andreas Atlas, and historic plat maps for historic information.



Working on Iowa Farmsteads

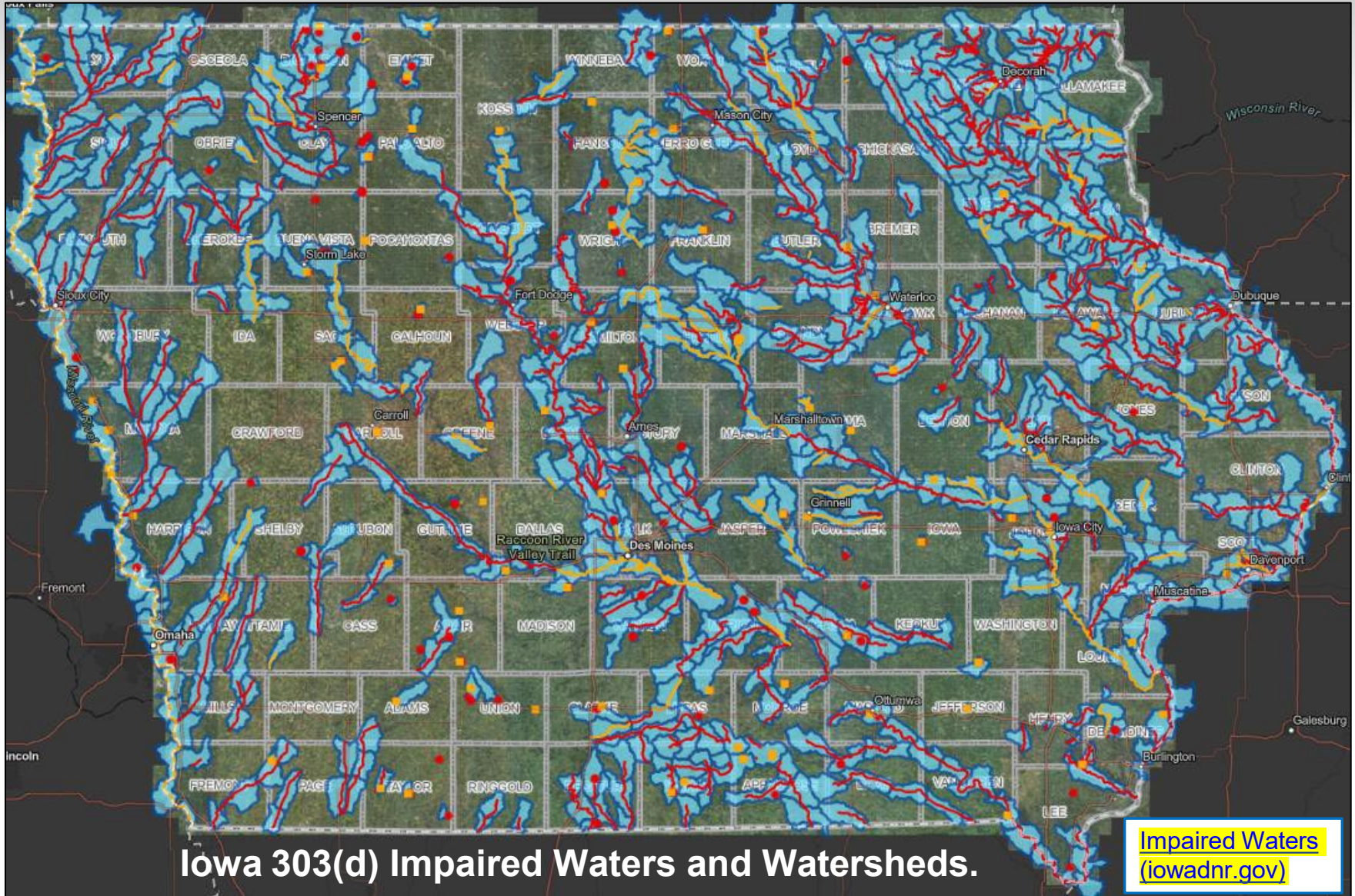
- If NRCS is planning to demolish standing structures that are older than 50 years of age, then an architectural historian review will be needed.
- If there will be ground disturbance within the farmstead, then more intensive field investigation is needed to look for buried cultural resources.
 - Sometimes this can be completed by the field office under guidance from the state office.
 - But in some cases, a state office field investigation will be needed.



NRCS 9-Nine Step Planning Process



- Cultural resources should be considered during Step 3 (or earlier) of the NRCS planning process.
- Cultural resource concerns may be a part of every step.



Review of Important Resource Issues

- As of 2013, Iowa established nonpoint nutrient reduction goals to Iowa waters and the Gulf of Mexico of:
 - 41% reduction in total nitrogen.
 - 29% reduction in total phosphorus.
- [For more information visit: Tracking the Iowa Nutrient Reduction Strategy \(iastate.edu\)](#)

Review of Major Land Uses or Agronomic Practices

Iowa has:

- Over 84,000 farms
- 30.5 million acres of farmland.
 - 85% of the land in Iowa
 - 75% in corn and soybeans
- 5.9 million cows (beef and dairy)
- 24 million hogs
- 40 million layers (2022)

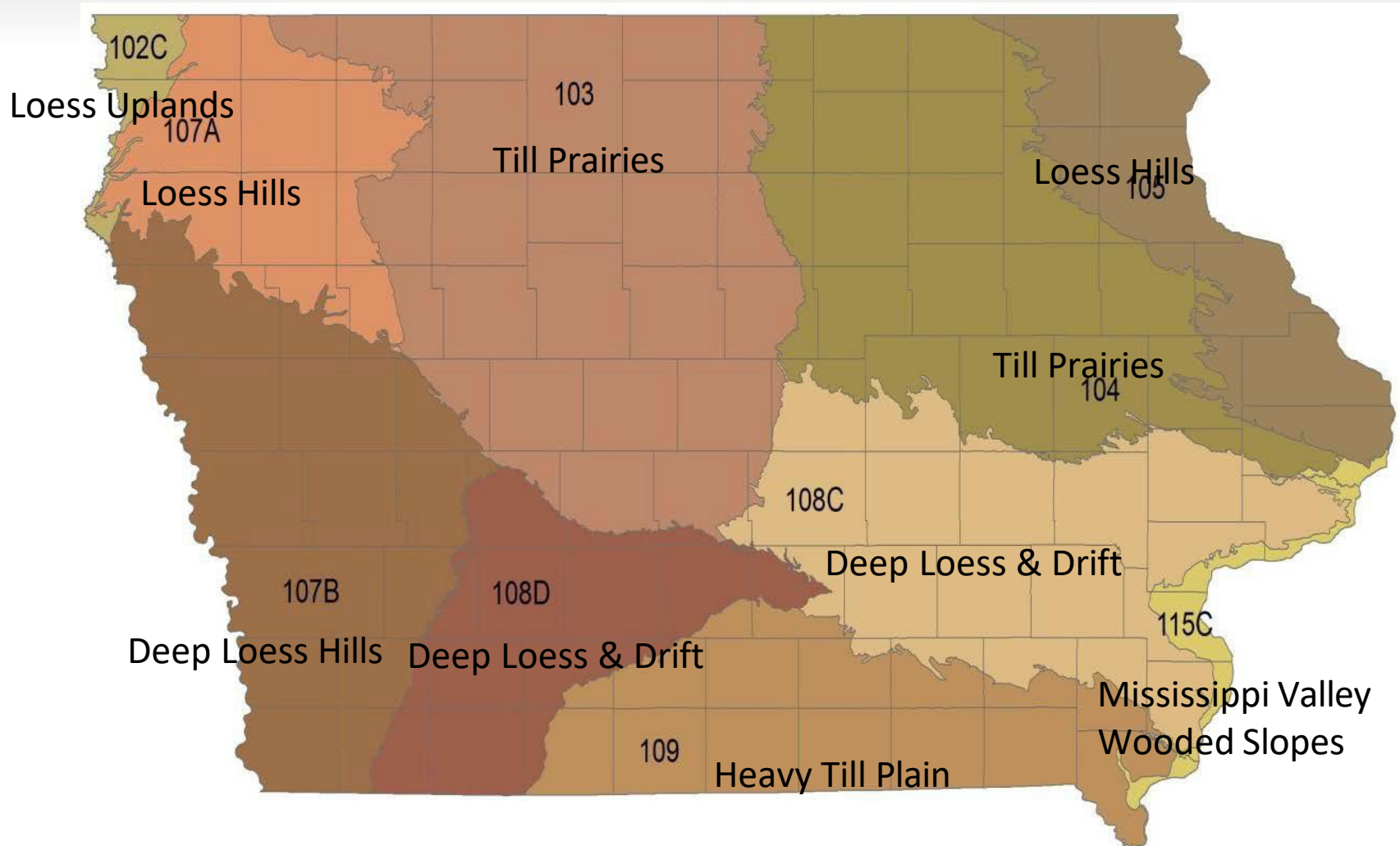
Review of Major Land Uses or Agronomic Practices

Iowa is the number one agricultural producer of:

- Corn for grain
- Commercial Red meat production
- Hogs and pigs
- Egg production
- Ethanol

And number two in total value of agricultural products sold.

Iowa's Major Land Resource Areas (MLRA)



Iowa's Major Land Resource Areas (MLRA)

You can find more information about Iowa's MLRAs:

- FOTG, Section 2, Ecological Site Descriptions.
- USDA-NRCS MLRA website [Major Land Resource Area \(MLRA\) | Natural Resources Conservation Service \(usda.gov\)](https://www.nrcs.usda.gov/ia/mlra)
 - At the above website you can download or view a copy of *Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean, and the Pacific Basin*
United States Department of Agriculture, Agriculture Handbook 296



Iowa's Major Land Resource Areas (MLRA) 102C- Loess Uplands

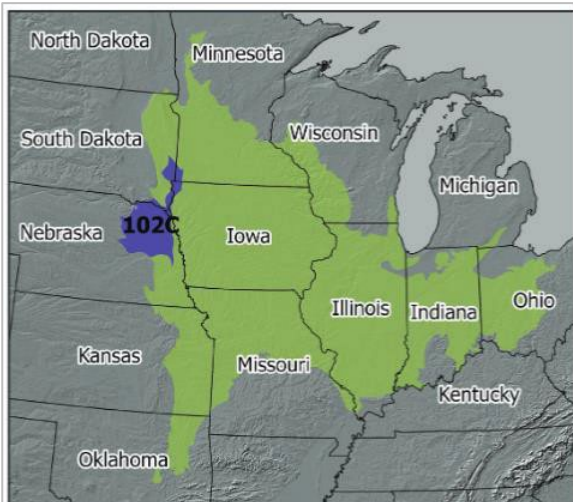


Figure 102C-1: Location of MLRA 102C, which covers 2,894,500 hectares (7,152,400 acres), within Region M.

- Rolling hills covered in deep loess.
- 74% of this MLRA is farmed.
- 20% of area is irrigated.
- Major resource concerns are:
 - Wind erosion
 - Water erosion

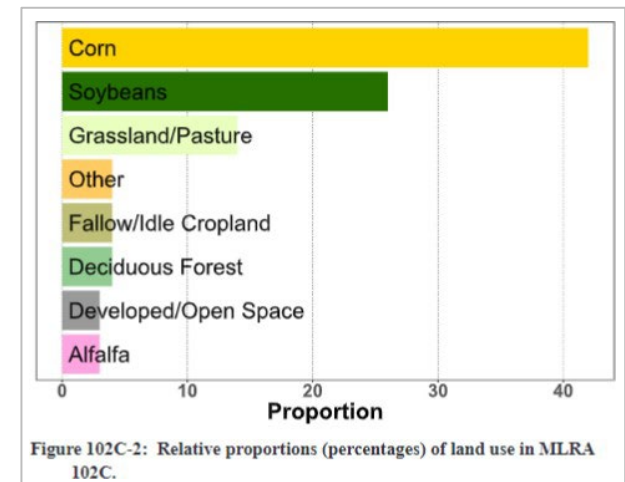


Figure 102C-2: Relative proportions (percentages) of land use in MLRA 102C.

Iowa's Major Land Resource Areas (MLRA)

103- Till Prairies

- Low relief till plains, disintegration moraines, and glacial lakes.
- Nearly half of MLRA is made up of hydric soils.
- 80% of MLRA is farmed.
- Less than 1% is used for urban development.
- Major resource concerns are:
 - Water erosion
 - Depletion of organic matter
 - Excess surface and subsurface water
 - Water quality.

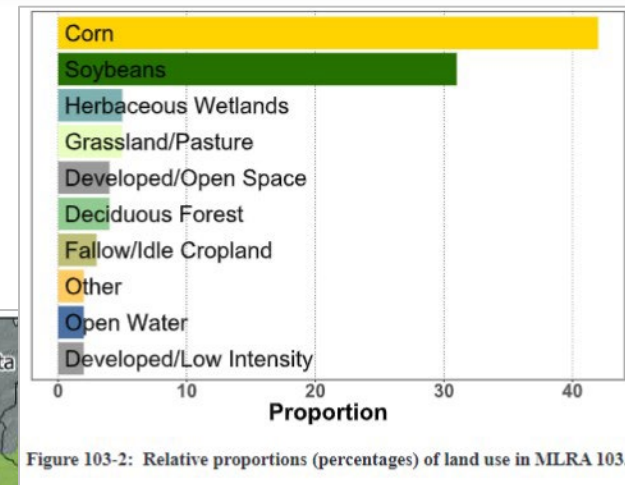


Figure 103-2: Relative proportions (percentages) of land use in MLRA 103.

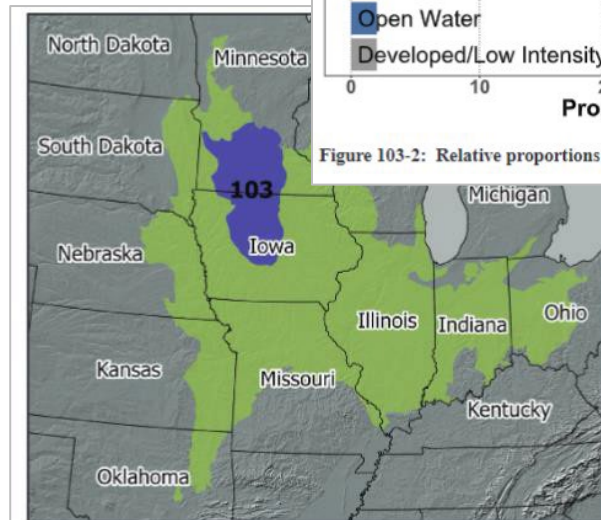


Figure 103-1: Location of MLRA 103, which covers 7,180,000 hectares (17,742,100 acres), within Region M.

Iowa's Major Land Resource Areas (MLRA)

104- Till Prairies

- Long slopes and common karst topography.
- Major resource concerns are:
 - Water erosion
 - Soil health
 - Excess surface and subsurface water
 - Water quality

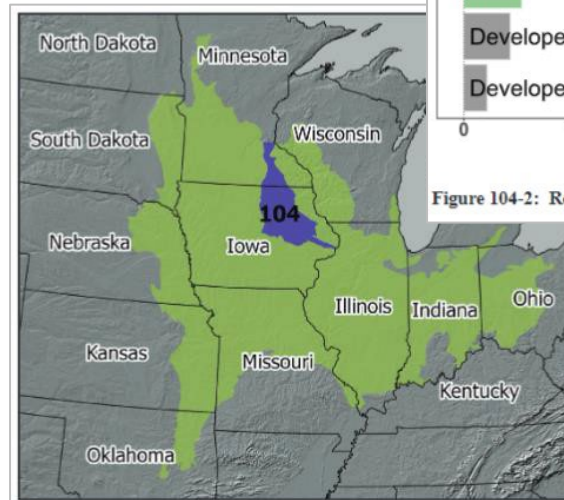


Figure 104-1: Location of MLRA 104, which covers 3,017,300 hectares (7,455,900 acres), within Region M.

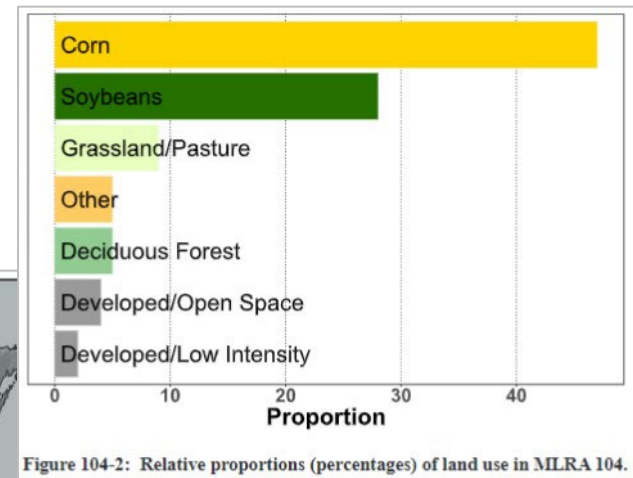


Figure 104-2: Relative proportions (percentages) of land use in MLRA 104.

Iowa's Major Land Resource Areas (MLRA)

105- Loess Hills

- Part of Driftless Area and was not glaciated.
- Gently sloping to rolling farmed hilltops.
- Steep wooded valleys and flood plains.
- Major resource concerns are:
 - Water erosion
 - Depletion of soil organic matter
 - Water quality

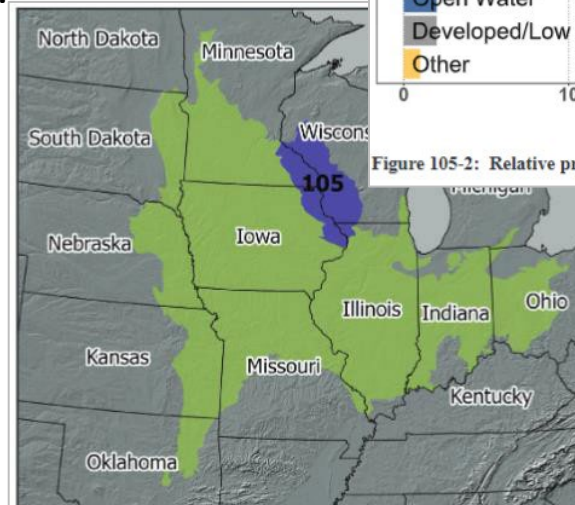


Figure 105-1: Location of MLRA 105, which covers 5,184,700 hectares (12,811,600 acres), within Region M.

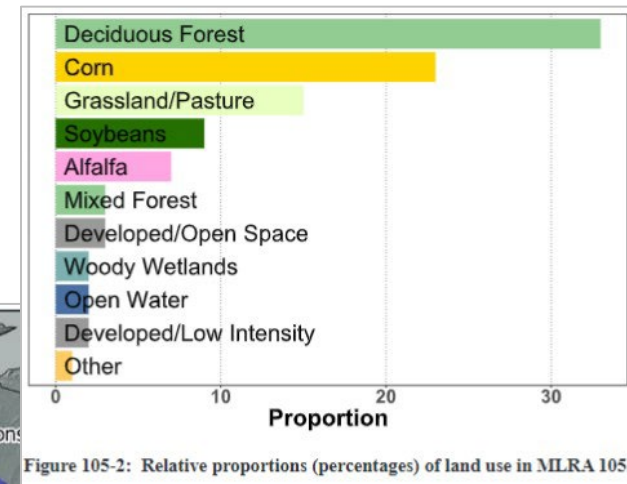


Figure 105-2: Relative proportions (percentages) of land use in MLRA 105.

Iowa's Major Land Resource Areas (MLRA) 107 (A and B)- Loess Hills

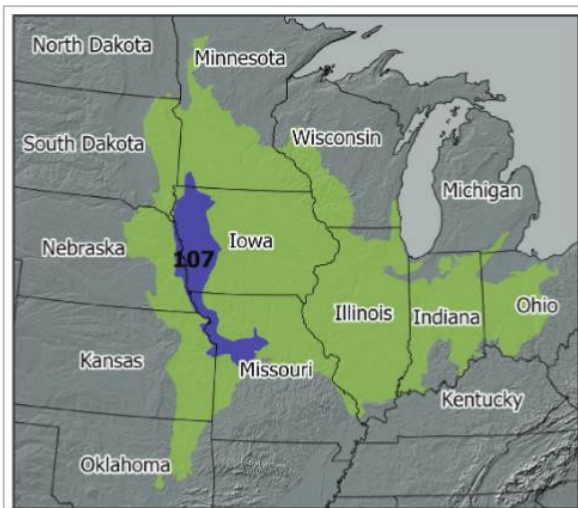


Figure 107-1: Location of MLRA 107, which covers 5,352,600 hectares (13,226,500 acres), within Region M.

- Loess covered, rolling to hilly till plain.
- Major resource concerns:
 - Water erosion
 - Soil health
 - Water quality

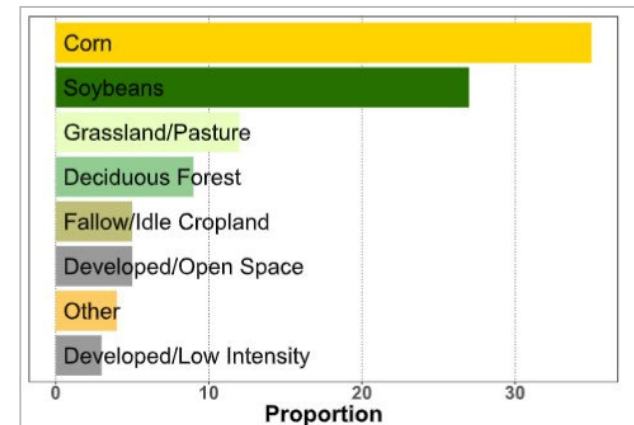


Figure 107-2: Relative proportions (percentages) of land use in MLRA 107.

Iowa's Major Land Resource Areas (MLRA) 108 (C and D)- Deep Loess and Drift

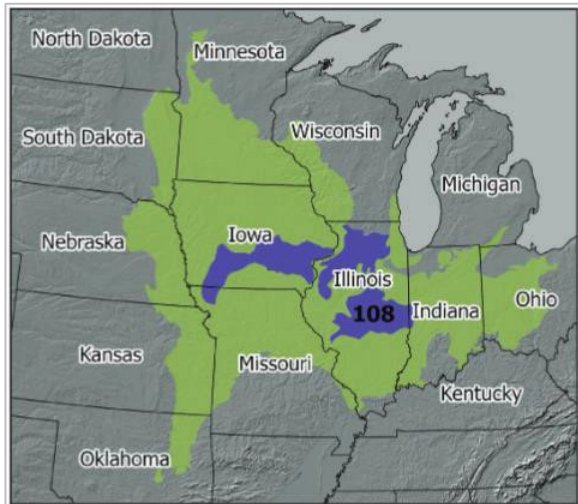


Figure 108-1: Location of MLRA 108, which covers 8,538,900 hectares (21,099,900 acres), within Region M.

- Loess covered, nearly level to hilly till plain.
- Extensively used for cash crops.
- Better farmland increasingly being used for urban development.
- Major resource concerns:
 - Wind erosion
 - Water erosion
 - Soil health
 - Water quality

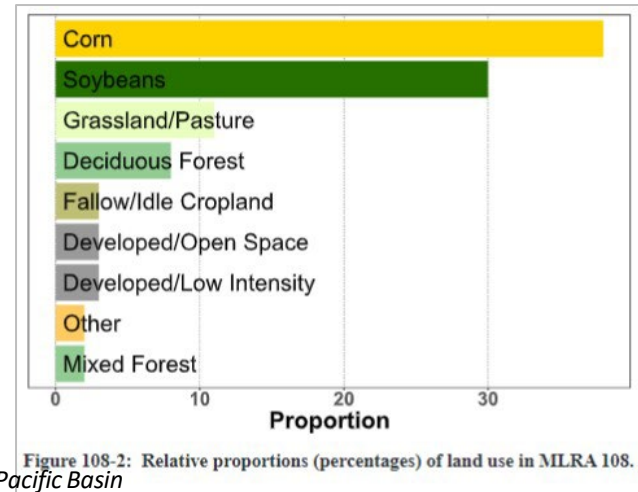
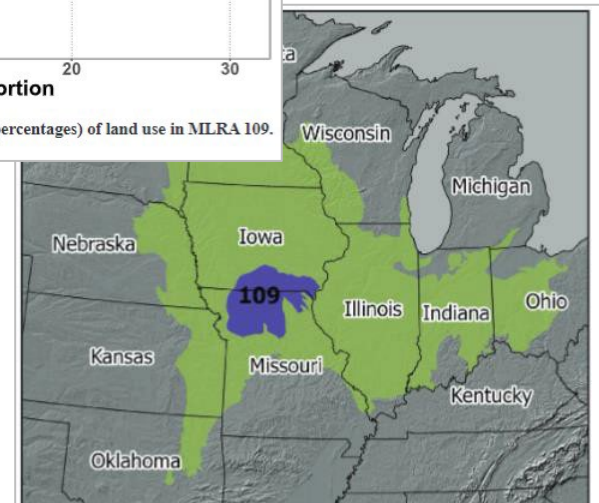
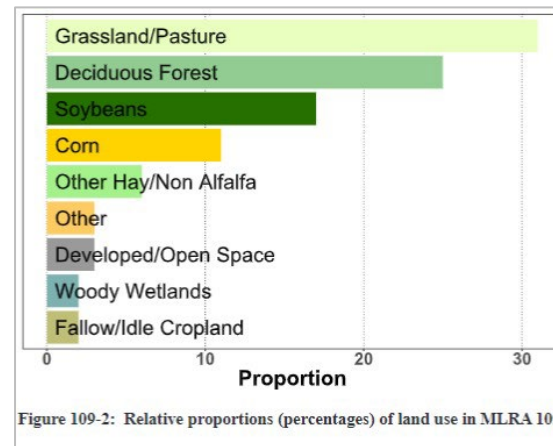


Figure 108-2: Relative proportions (percentages) of land use in MLRA 108.

Iowa's Major Land Resource Areas (MLRA)

109- Heavy Till Plain

- Loess covers, rolling hills of clayey till.
- Beef and swine are sources of income on many farms.
- Forested areas on steep valley sides or low-lying areas of a flood plain.
- Major resource concerns are:
 - Water erosion
 - Soil health
 - Water quality



Iowa's Major Land Resource Areas (MLRA)

115C- Mississippi Valley Wooded Slopes

- Deeply dissected, loess covered hills.
- About 33% of area is forested, mostly on steeper slopes.
- Major resource concerns are:
 - Wind erosion
 - Water erosion
 - Soil health
 - Flooding
 - Excessive soil wetness
 - Limited available water capacity
 - Surface water quality

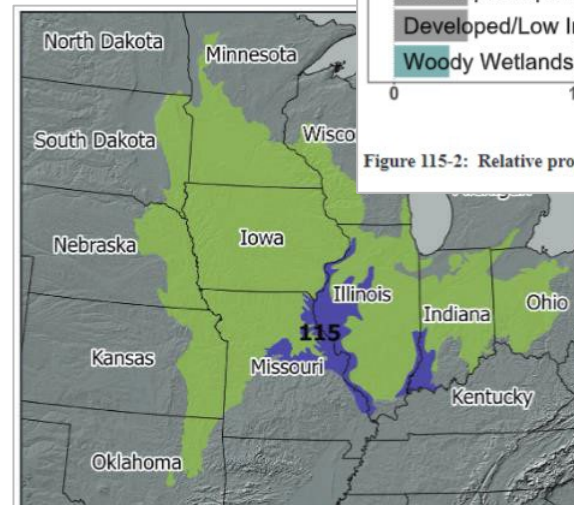
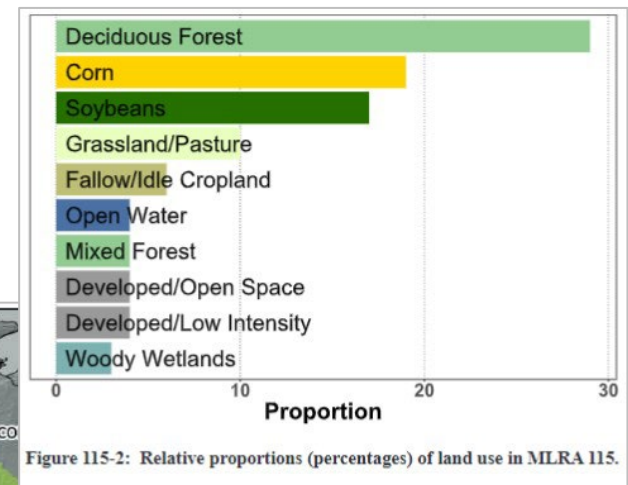


Figure 115-1: Location of MLRA 115, which covers 6,496,700 hectares (16,053,600 acres), within Region M.



Review of Major Land Ownership

- 97% of Iowa land is privately owned.
- Private land conservation efforts are the key to conservation in Iowa.



Expected TSP Workflow

- The State Resource Conservationist (SRC) will be responsible for reviewing TSP conservation planning for the National Planner Designation.
- Subsequent conservation plans will be reviewed by the District Conservationist (DC) at the local USDA Service Center.
- The SRC will conduct plan reviews for TSP planner designation renewals.
- TSPs will work with the local District Conservationist to make sure the proper environmental evaluations (NRCS.CPA.52) are completed.

Certificate of Completion

After viewing the State Specific Training module, please print and sign the completion certificate on the following slide.

The certificate is your acknowledgement that based on the information provided in this module, you have the proper knowledge, skills and ability to conduct planning in this state.

Send the signed certificate to the Iowa State TSP Coordinator.

Click the link below to open a pdf version of the State TSP Coordinators list.

[State TSP Coordinators and Backups](#)

STATE SPECIFIC TRAINING MODULE COMPLETION CERTIFICATE

I, _____, hereby verify I have viewed and understand the
TSP Name
content of the Iowa State Specific Training Module and affirm I have the
knowledge, skills and ability to conduct conservation planning services in that
state.

TSP signature

Date

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To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at [How to File a Program Discrimination Complaint](#) and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992.

Submit your completed form or letter to USDA by:

- (1) mail: U.S. Department of Agriculture
Office of the Assistant Secretary for Civil Rights
1400 Independence Avenue, SW
Washington, D.C. 20250-9410;
- (2) fax: (202) 690-7442; or
- (3) email: program.intake@usda.gov.

USDA is an equal opportunity provider, employer, and lender.