Assembling Resource Data for Field Inventories

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Harrison, Arkansas
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Ft Worth, Texas

Introduction – Why?

Objectives

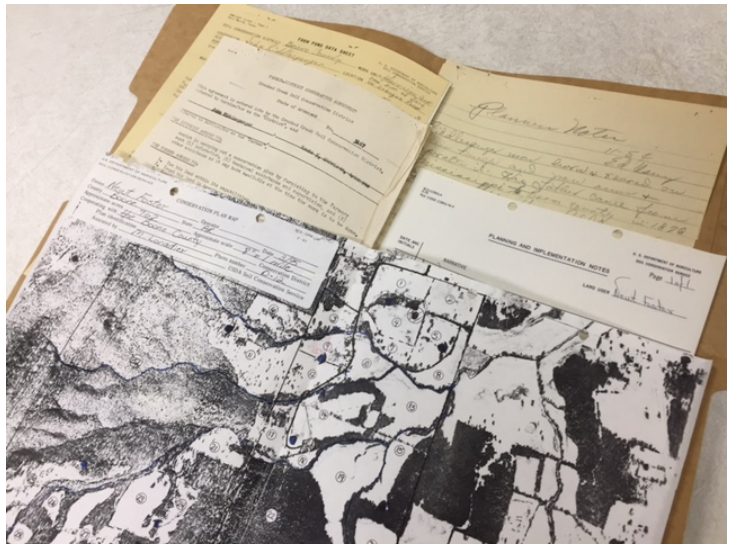
At the end of this presentation you will be able to:

- Analyze information in the office using maps and aerial imagery to identify potential issues.
- Gain an understanding of GIS information that is available for collecting data prior to meeting with the client
- Identify other tools to take to the field for identifying problems/inventorying resources

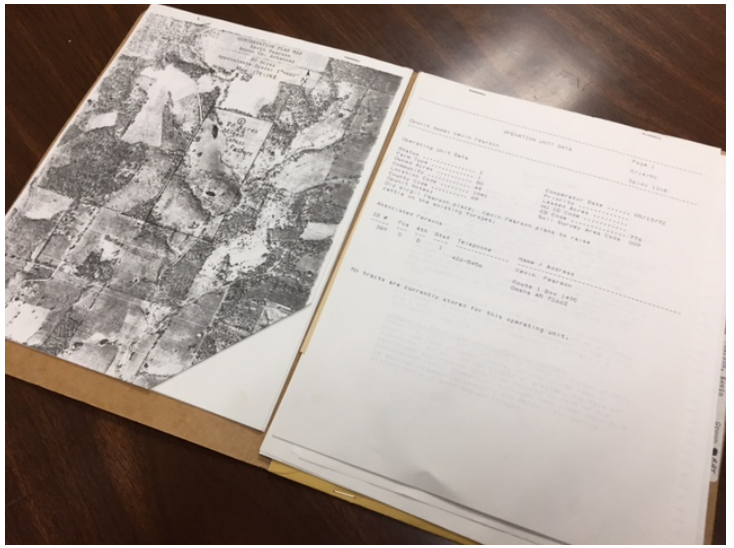
What Resources do we have in our offices?

- Existing conservation plan and prior documentation
- Latest Aerial Photography
- Historical Aerial Photography
- Topographic Maps

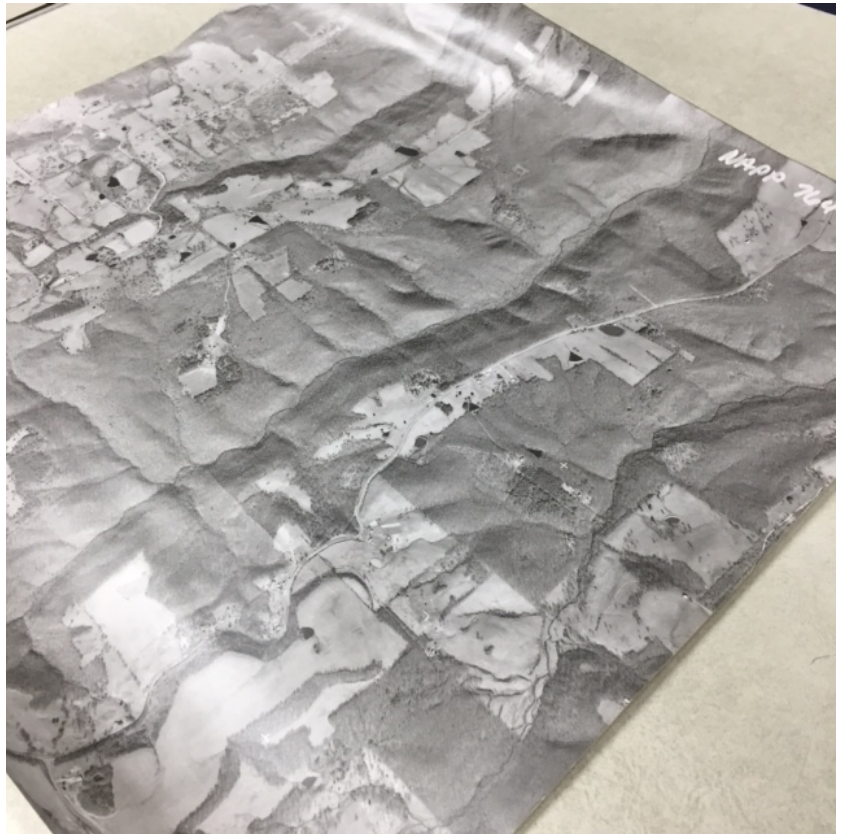
Existing conservation plan and prior documentation



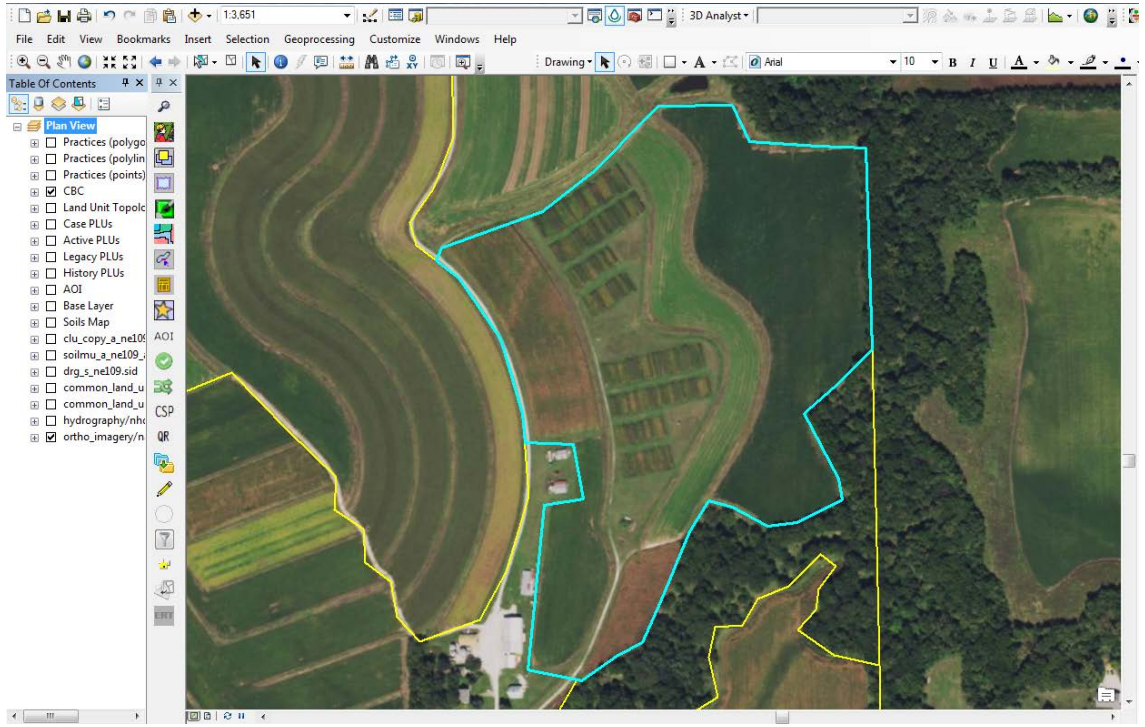
- Assistance Notes
- Scheduled and Applied Practices
- Historical Designs
- As Built Plans
- Plan Maps



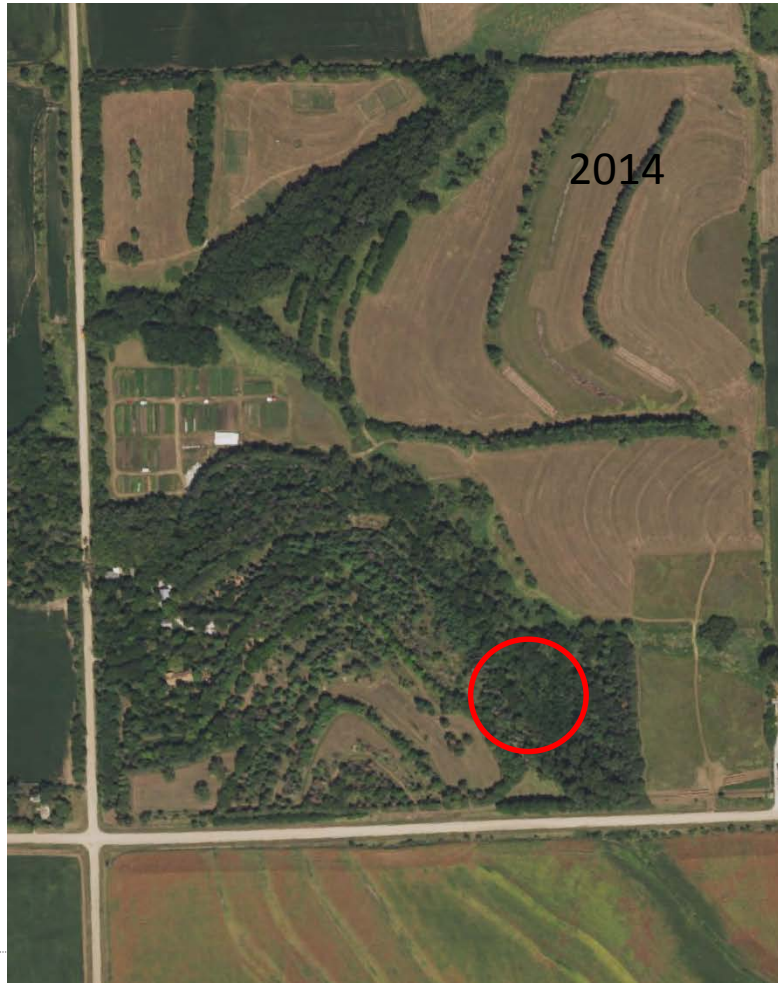
Aerial Photography



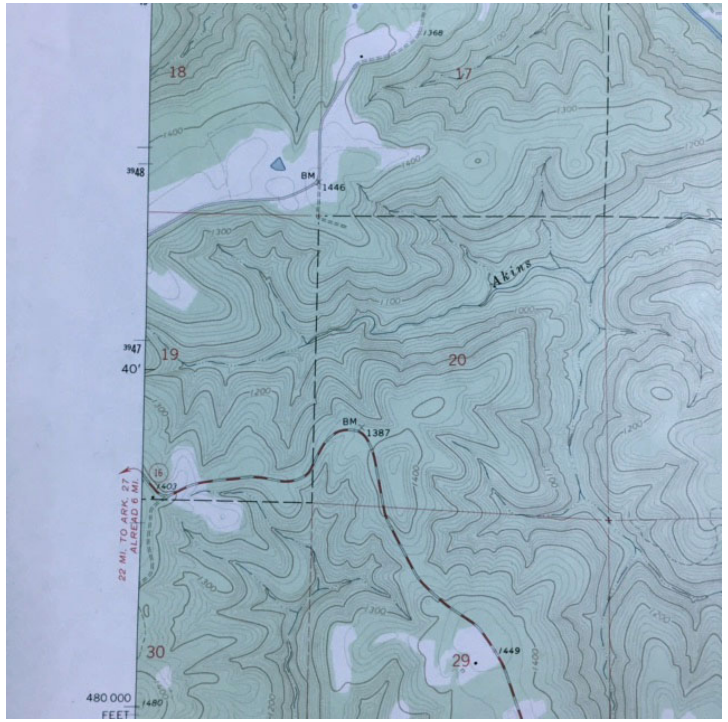
- Land Cover
- Practices
- Drainage
- Wetness
- Cultural Features



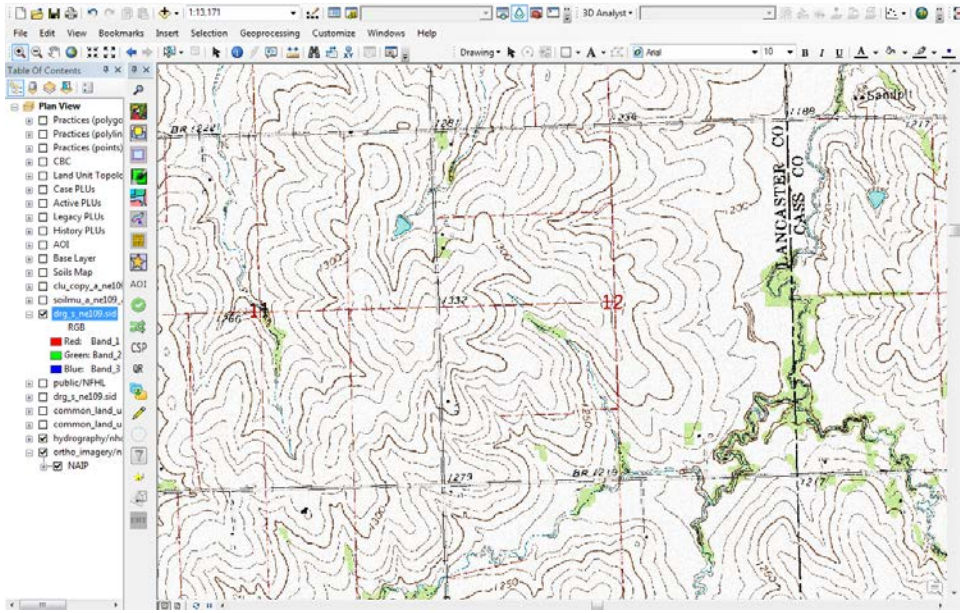
Historical Aerial Photography



Topographic Maps

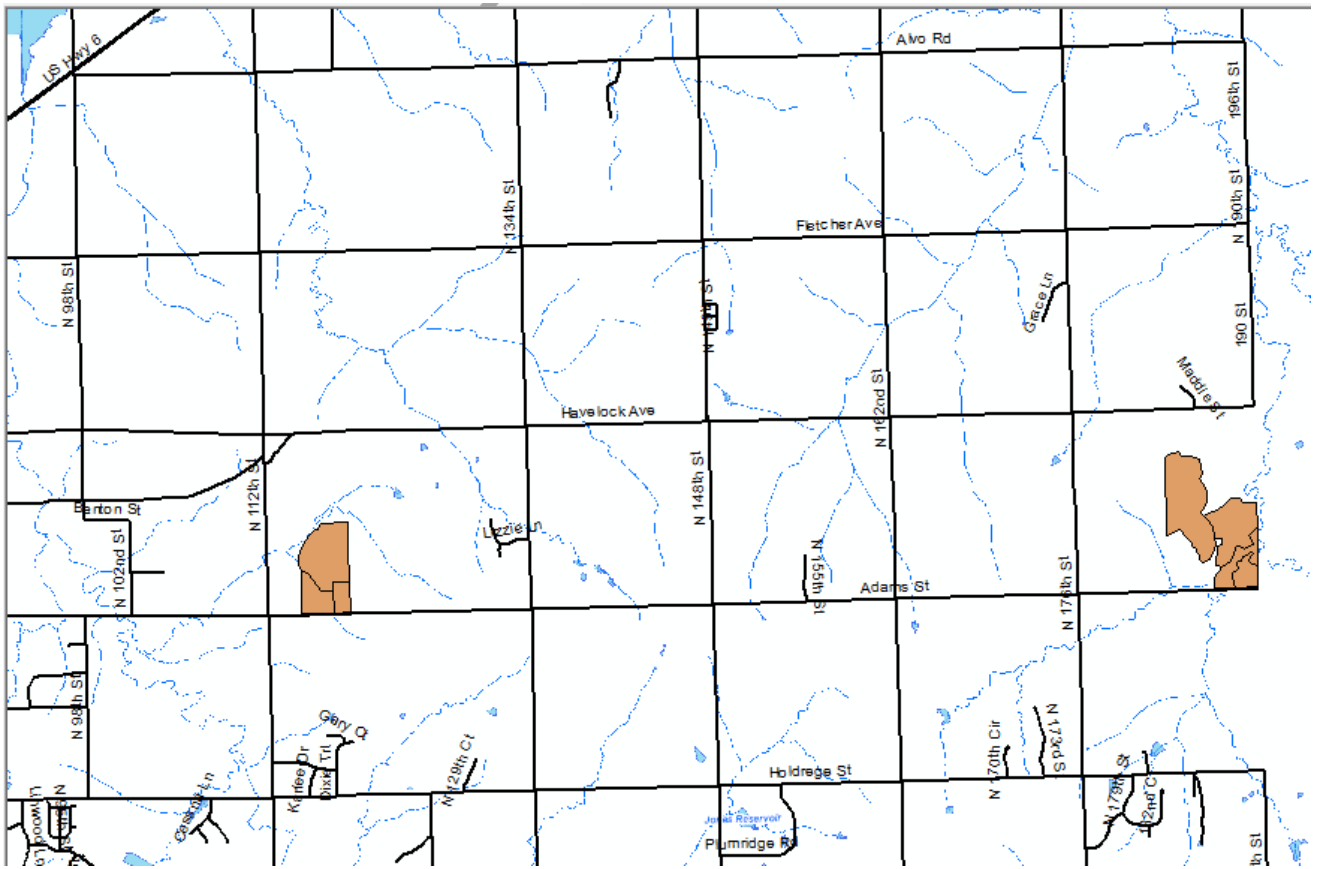


- Elevation
- Legal Description
- Water Features
- Cultural Features
- Drainage Patterns
- Drainage Area
- Slopes

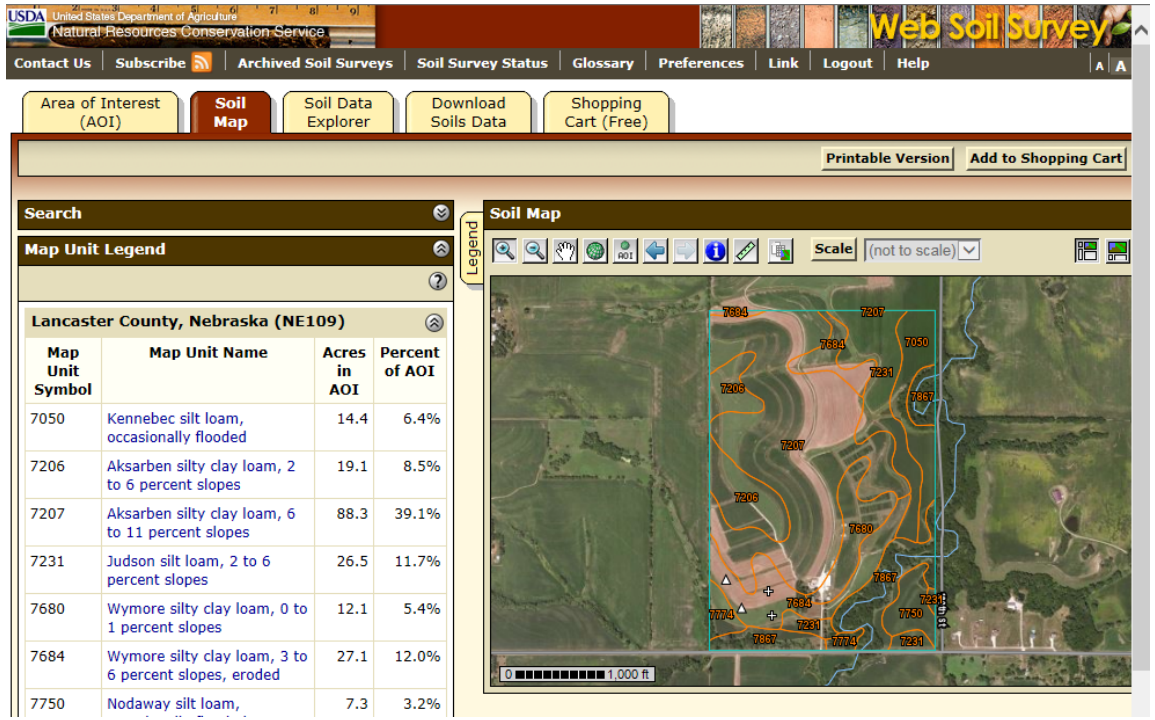


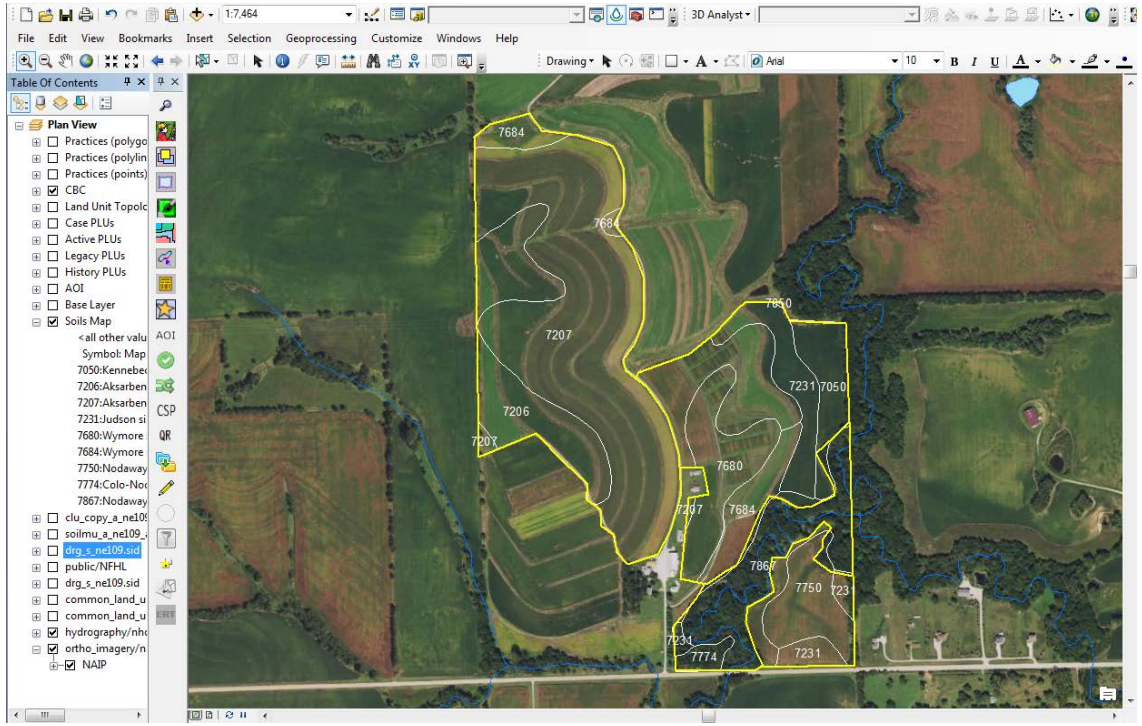
Street and Road Maps

- Highways and Streets
- Cities, Towns, Communities



Soils Maps


Web Soil Survey
Contact Us | Subscribe | Archived Soil Surveys | Soil Survey Status | Glossary | Preferences | Link | Logout | Help
Area of Interest (AOI)
Soil Map
Soil Data Explorer
Download Soils Data
Shopping Cart (Free)
Printable Version
Add to Shopping Cart
Search
Map Unit Legend
Soil Map
Scale
(not to scale)
Legend
Lancaster County, Nebraska (NE109)
Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI
7050 | Kennebec silt loam, occasionally flooded | 14.4 | 6.4%
7206 | Aksarben silty clay loam, 2 to 6 percent slopes | 19.1 | 8.5%
7207 | Aksarben silty clay loam, 6 to 11 percent slopes | 88.3 | 39.1%
7231 | Judson silt loam, 2 to 6 percent slopes | 26.5 | 11.7%
7680 | Wymore silty clay loam, 0 to 1 percent slopes | 12.1 | 5.4%
7684 | Wymore silty clay loam, 3 to 6 percent slopes, eroded | 27.1 | 12.0%
7750 | Nodaway silt loam, | 7.3 | 3.2%


File Edit View Bookmarks Insert Selection Geoprocessing Customize Windows Help
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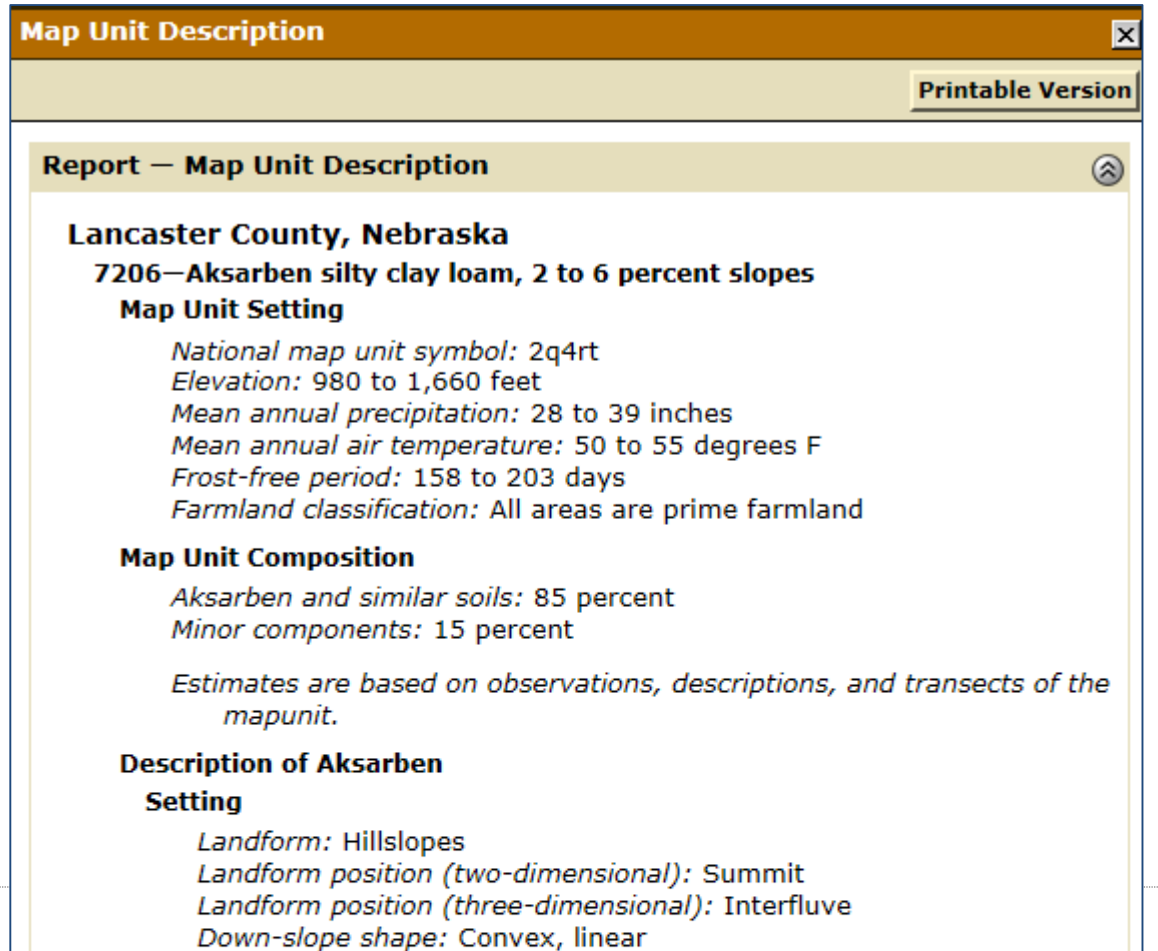
Plan View
7684
7207
7206
7231
7050
7680
7867
7750
7774

Web Soil Survey or Soil Data Viewer Maps and Reports

- Map Unit Description Reports
- Soil Series Descriptions
- Prime Farmland
- Hydric Soils



Map Unit Description

Printable Version

Report — Map Unit Description

Lancaster County, Nebraska

7206—Aksarben silty clay loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2q4rt
Elevation: 980 to 1,660 feet
Mean annual precipitation: 28 to 39 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 158 to 203 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Aksarben and similar soils: 85 percent
Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Aksarben

Setting

Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex, linear

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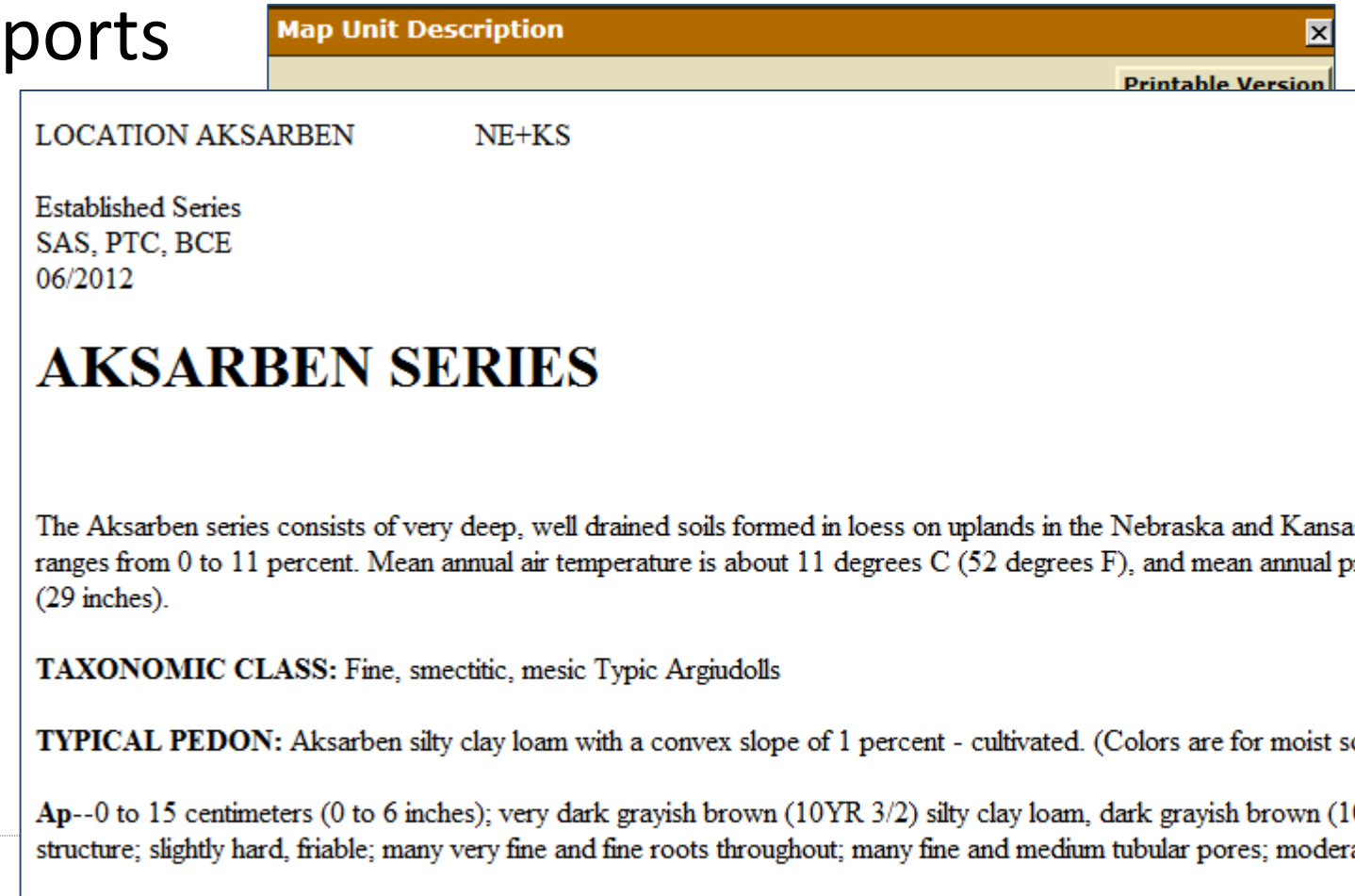

Map Unit Description

Printable Version

LOCATION AKSARBEN NE+KS

Established Series
SAS, PTC, BCE
06/2012

AKSARBEN SERIES

The Aksarben series consists of very deep, well drained soils formed in loess on uplands in the Nebraska and Kansas Lo
ranges from 0 to 11 percent. Mean annual air temperature is about 11 degrees C (52 degrees F), and mean annual precip
(29 inches).

TAXONOMIC CLASS: Fine, smectitic, mesic Typic Argiudolls

TYPICAL PEDON: Aksarben silty clay loam with a convex slope of 1 percent - cultivated. (Colors are for moist soil un

Ap--0 to 15 centimeters (0 to 6 inches); very dark grayish brown (10YR 3/2) silty clay loam, dark grayish brown (10YR
structure; slightly hard, friable; many very fine and fine roots throughout; many fine and medium tubular pores; moderately

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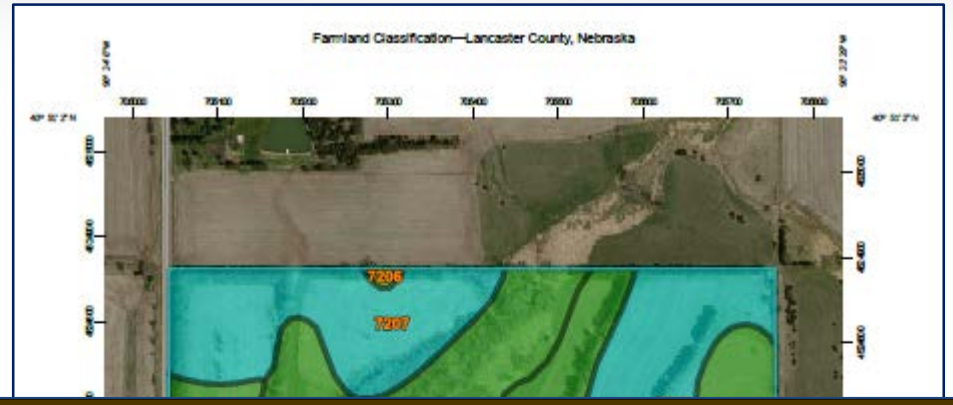

Tables — Farmland Classification — Summary By Map Unit

Summary by Map Unit — Lancaster County, Nebraska (NE109)

Map unit symbol	Map unit name	Rating
7050	Kennebec silt loam, occasionally flooded	All areas are prime farmland
7206	Aksarben silty clay loam, 2 to 6 percent slopes	All areas are prime farmland
7207	Aksarben silty clay loam, 6 to 11 percent slopes	Farmland of statewide importance
7231	Judson silt loam, 2 to 6 percent slopes	All areas are prime farmland
7680	Wymore silty clay loam, 0 to 1 percent slopes	All areas are prime farmland
7684	Wymore silty clay loam, 3 to 6 percent slopes, eroded	All areas are prime farmland
7750	Nodaway silt loam, occasionally flooded	All areas are prime farmland
7774	Colo-Nodaway silty clay loams, frequently flooded	Not prime farmland
7867	Nodaway silt loam, channeled, frequently flooded	Not prime farmland

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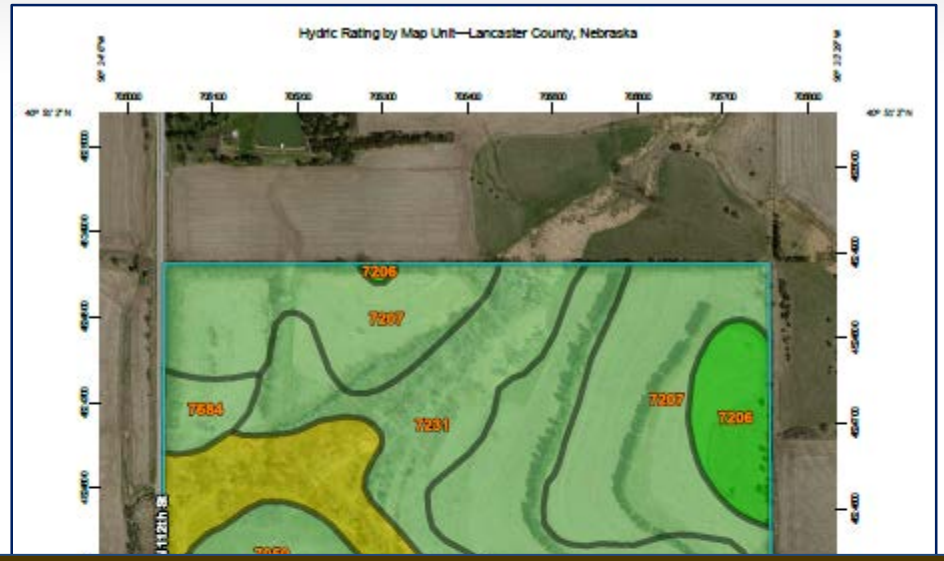
- Hydric Soils



Tables — Hydric Rating by Map Unit — Summary By Map Unit

Summary by Map Unit — Lancaster County, Nebraska (NE109)

Map unit symbol	Map unit name	R
7050	Kennebec silt loam, occasionally flooded	5
7206	Aksarben silty clay loam, 2 to 6 percent slopes	0
7207	Aksarben silty clay loam, 6 to 11 percent slopes	1
7231	Judson silt loam, 2 to 6 percent slopes	1
7680	Wymore silty clay loam, 0 to 1 percent slopes	0
7684	Wymore silty clay loam, 3 to 6 percent slopes, eroded	1
7750	Nodaway silt loam, occasionally flooded	5
7774	Colo-Nodaway silty clay loams, frequently flooded	60
7867	Nodaway silt loam, channeled, frequently flooded	5

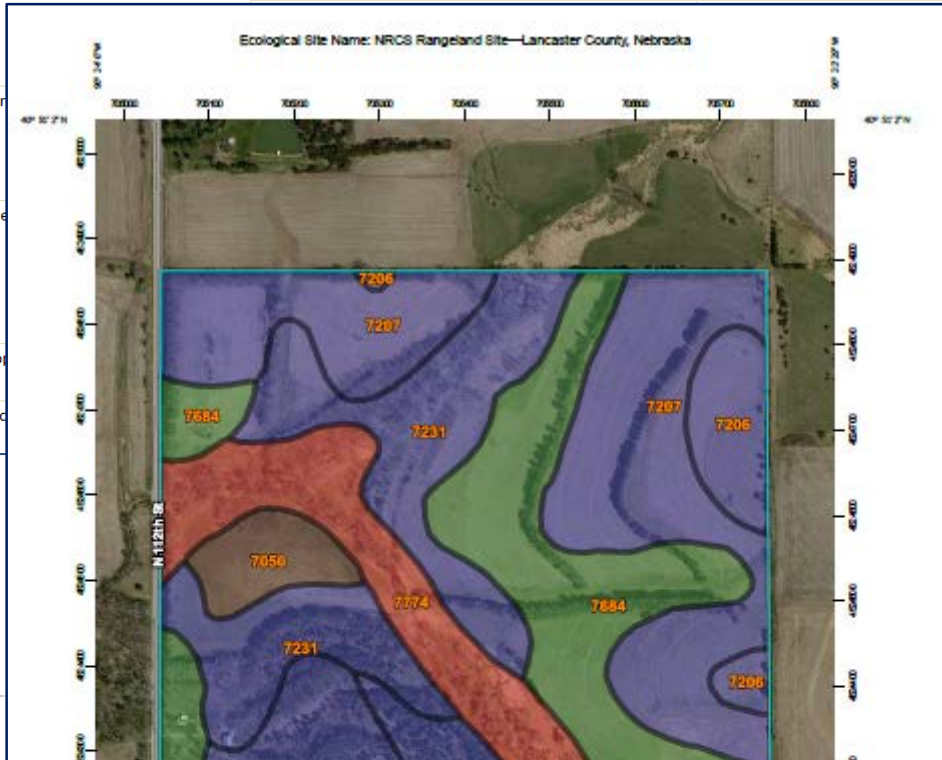
Web Soil Survey or Soil Data Viewer Maps and Reports

- Ecological Site Description
- Forage Suitability Groups
- Soil Erosion – T Factor
- Available Water Capacity
- Organic Matter

Table — Ecological Sites by Map Unit Component — Rangeland

Lancaster County, Nebraska

Map unit symbol	Map unit name	Component name (percent)	Ecological site
7050	Kennebec silt loam, occasionally flooded	Kennebec (85%)	R106XY070NE — Loamy Lowland
		Muscotah (5%)	R106XY070NE — Loamy Lowland
		Reading (3%)	R106XY070NE — Loamy Lowland
7206	Aksarben silty clay loam, 2 to 6 per		
7207	Aksarben silty clay loam, 6 to 11 pe		
7231	Judson silt loam, 2 to 6 percent slo		
7680	Wymore silty clay loam, 0 to 1 perc		



Web Soil Survey or Soil Data Viewer Maps and Reports

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- Forage Suitability Groups
- Soil Erosion – T Factor
- Available Water Capacity
- Organic Matter

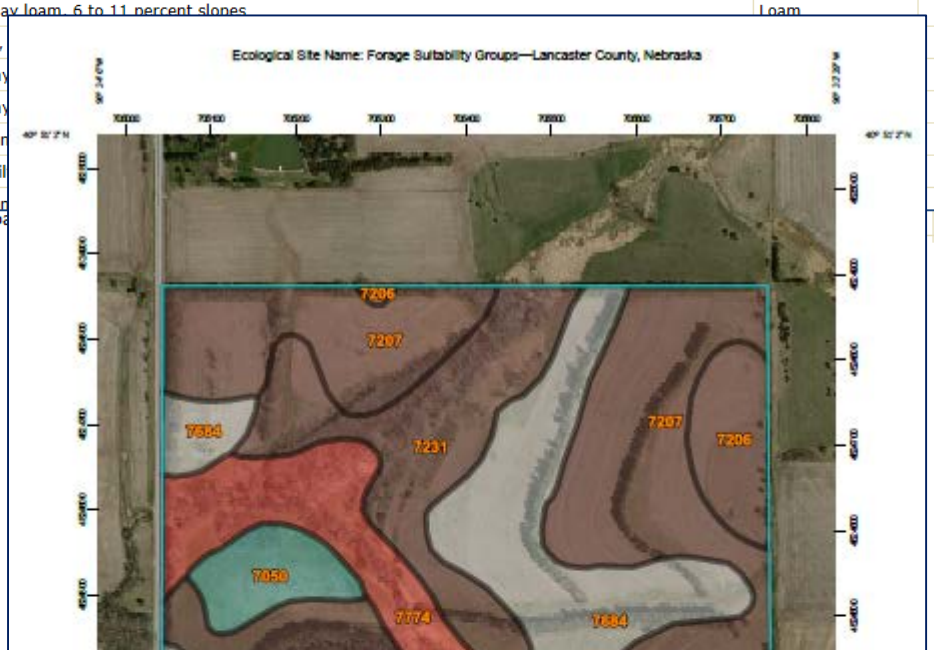
Table — Ecological Sites by Map Unit Component — Rangeland

Lancaster County, Nebraska

Tables — Ecological Site Name: Forage Suitability Groups — Summary By Map Unit

Summary by Map Unit — Lancaster County, Nebraska (NE109)

Map unit symbol	Map unit name	Rating
7050	Kennebec silt loam, occasionally flooded	Overflow
7206	Aksarben silty clay loam, 2 to 6 percent slopes	Loam
7207	Aksarben silty clay loam, 6 to 11 percent slopes	Loam
7231	Judson silt loam,	
7680	Wymore silty clay	
7684	Wymore silty clay	
7750	Nodaway silt loar	
7774	Colo-Nodaway sil	
7867	Nodaway silt loar	
7207	Aksarben silty clay loa	



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- Ecological Site Description
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Table — Ecological Sites by Map Unit Component — Rangeland

Lancaster County, Nebraska

Map unit symbol	Map unit name	Component name (percent)

Tables — Ecological Site Name: Forage Suitability Groups — Summary By Map Unit

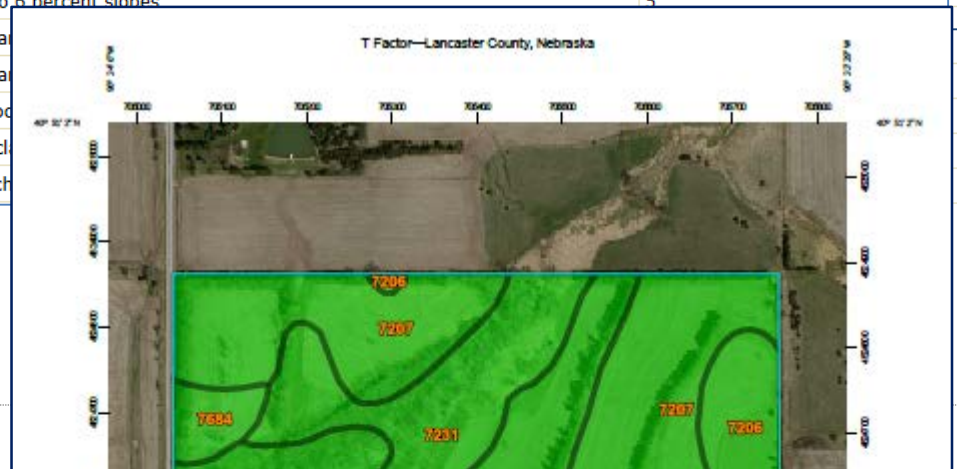
Summary by Map Unit — Lancaster County, Nebraska (NE109)

Map unit symbol	Map unit name	Rating

Tables — T Factor — Summary By Map Unit

Summary by Map Unit — Lancaster County, Nebraska (NE109)

Map unit symbol	Map unit name	Rating (tons per ac
7050	Kennebec silt loam, occasionally flooded	5
7206	Aksarben silty clay loam, 2 to 6 percent slopes	5
7207	Aksarben silty clay loam, 6 to 11 percent slopes	5
7231	Judson silt loam, 2 to 6 percent slopes	5
7680	Wymore silty clay loa	
7684	Wymore silty clay loa	
7750	Nodaway silt loam, oc	
7774	Colo-Nodaway silty cl	
7867	Nodaway silt loam, ch	



Web Soil Survey or Soil Data Viewer Maps and Reports

- Ecological Site Description
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- Soil Erosion – T Factor
- Available Water Capacity
- Organic Matter

Table — Ecological Sites by Map Unit Component — Rangeland

Lancaster County, Nebraska

Map unit symbol	Map unit name	Component name (percent)

Tables — Ecological Site Name: Forage Suitability Groups — Summary By Map Unit

Summary by Map Unit — Lancaster County, Nebraska (NE109)

Map unit symbol	Map unit name	Rating

Tables — T Factor — Summary By Map Unit

Summary by Map Unit — Lancaster County, Nebraska (NE109)

Map unit symbol	Map unit name	Rating (tons per a

Tables — Available Water Capacity — Summary By Map Unit

Summary by Map Unit — Lancaster County, Nebraska (NE109)

Map unit symbol	Map unit name	Rating (cen
7050	Kennebec silt loam, occasionally flooded	0.25
7206	Aksarben silty clay loam, 2 to 6 percent slopes	0.16
7207	Aksarben silty clay loam, 6 to 11 percent slopes	0.16
7231	Judson silt loam, 2 to 6 percent slopes	0.20
7680	Wymore silty clay loam, 0 to 1 percent slopes	0.18
7684	Wymore silty clay loam, 3 to 6 percent slopes, eroded	0.18
7750	Nodaway silt loam, occasionally flooded	0.19
7774	Colo-Nodaway silty clay loams, frequently flooded	0.20
7867	Nodaway silt loam, channeled, frequently flooded	0.19

Web Soil Survey or Soil Data Viewer Maps and Reports

- Ecological Site Description
- Forage Suitability Groups
- Soil Erosion – T Factor
- Available Water Capacity
- Organic Matter

Table — Ecological Sites by Map Unit Component — Rangeland

Lancaster County, Nebraska

Map unit symbol	Map unit name	Component name (percent)

Tables — Ecological Site Name: Forage Suitability Groups — Summary By Map Unit

Summary by Map Unit — Lancaster County, Nebraska (NE109)

Map unit symbol	Map unit name	Rating

Tables — T Factor — Summary By Map Unit

Summary by Map Unit — Lancaster County, Nebraska (NE109)

Map unit symbol	Map unit name	Rating (tons per ac
7050	Kennebec silt loam, occasionally flooded	5

Tables — Available Water Capacity — Summary By Map Unit

Summary by Map Unit — Lancaster County, Nebraska (NE109)

Map unit symbol	Map unit name	Rating (cen

Tables — Soil Health - Organic Matter — Summary By Map Unit

Summary by Map Unit — Lancaster County, Nebraska (NE109)

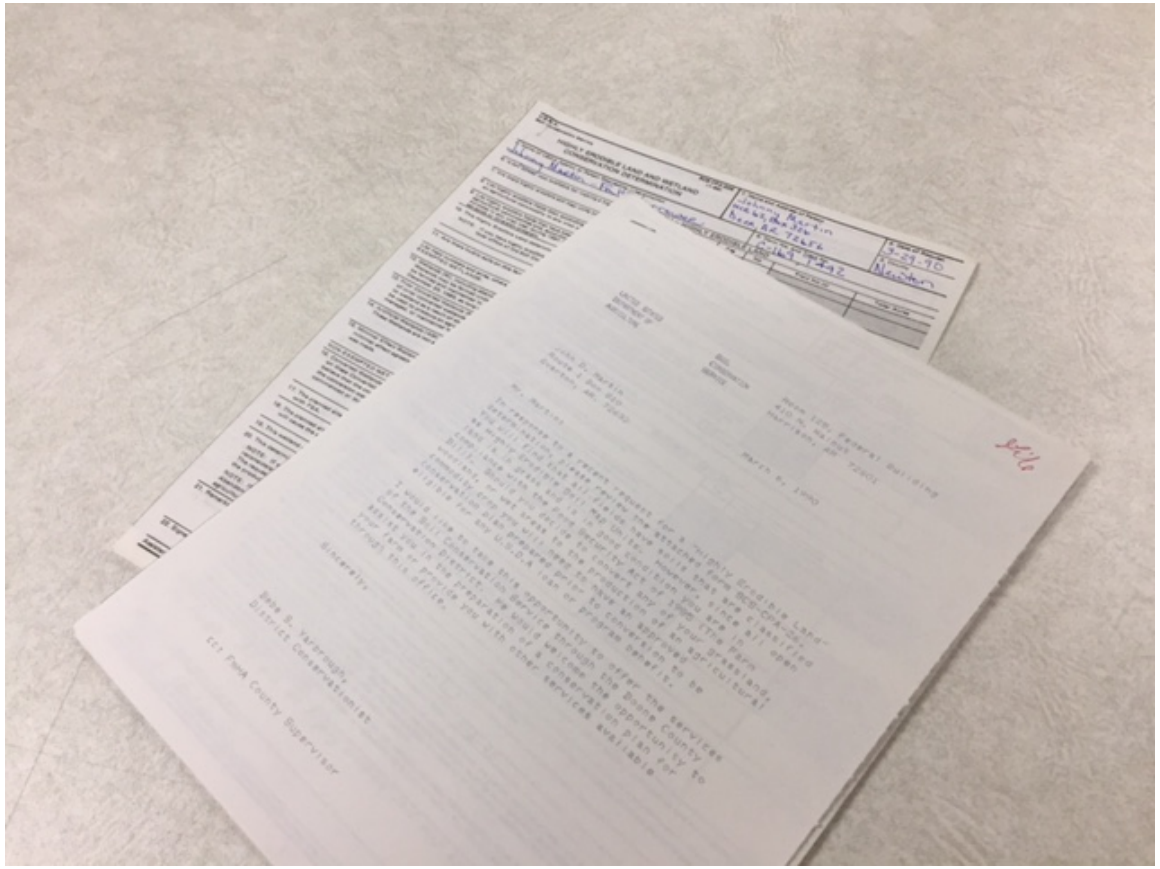
Map unit symbol	Map unit name	Rating (percent)
7050	Kennebec silt loam, occasionally flooded	3.00
7206	Aksarben silty clay loam, 2 to 6 percent slopes	3.50
7207	Aksarben silty clay loam, 6 to 11 percent slopes	3.50
7231	Judson silt loam, 2 to 6 percent slopes	4.50
7680	Wymore silty clay loam, 0 to 1 percent slopes	3.00
7684	Wymore silty clay loam, 3 to 6 percent slopes, eroded	3.00
7750	Nodaway silt loam, occasionally flooded	2.50
7774	Colo-Nodaway silty clay loams, frequently flooded	6.00

HEL/PHEL soils list and previous HEL Determinations

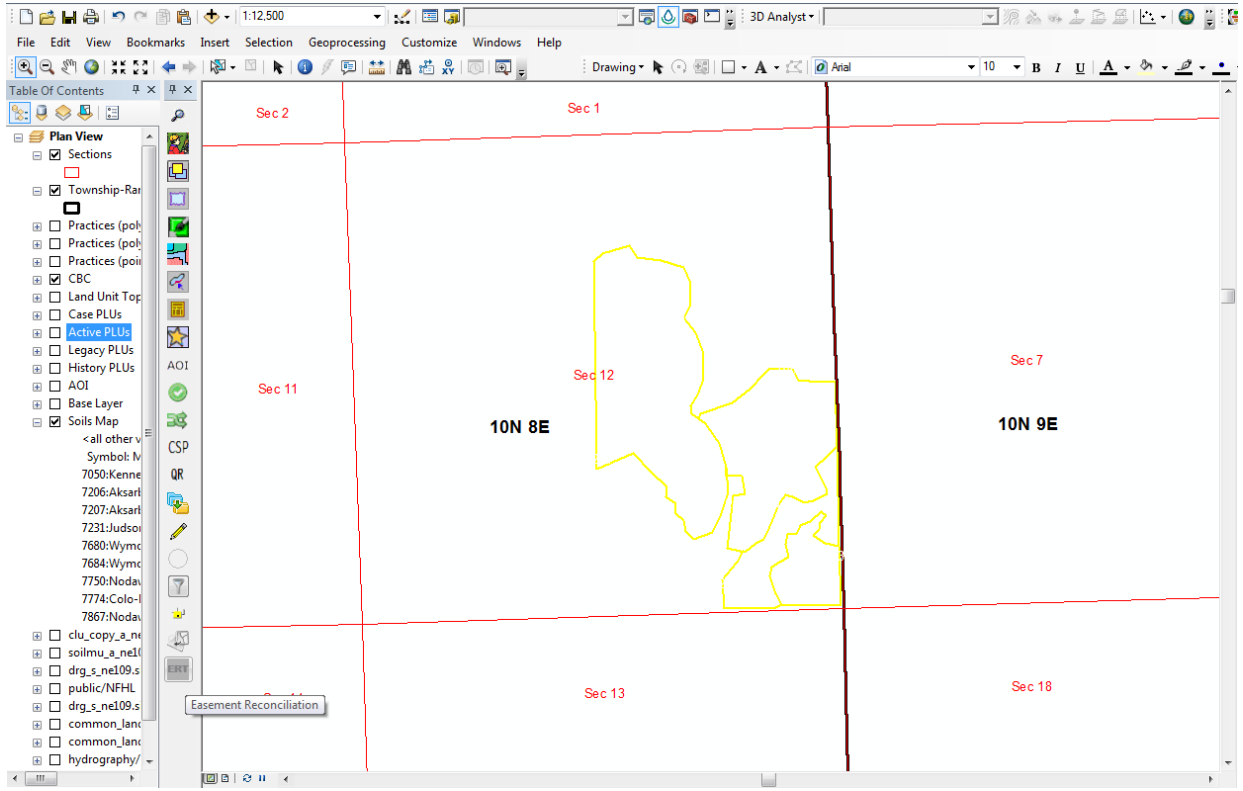
HIGHLY ERODIBLE LAND REPORT

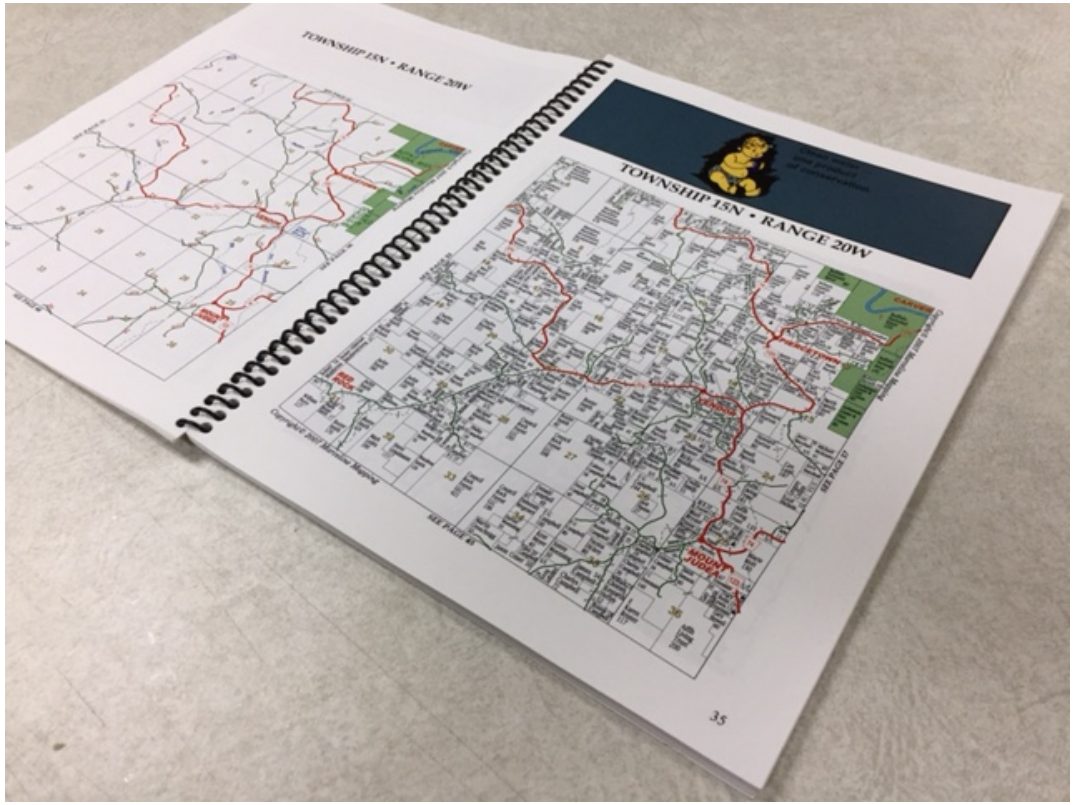
Survey Area: Lancaster County, Nebraska

Symbol	Soil Map Unit Name	1990 Frozen Factors C Factor = 0.2, R Factor = 150 T	I	K	HEL Classification 1 = HEL 2 = PHEL 3 = NHEL Wind	Water	Map Unit
BpF	Burchard-Nodaway Complex, 2 to 30 Percent Slopes	5	48	0.28	3	2	2
BrD	Burchard Clay Loam, 6 to 11 Percent Slopes	5	48	0.28	3	2	2
BrE	Burchard Clay Loam, 11 to 15 Percent Slopes	5	48	0.28	3	1	1
Bu	Butler Silt Loam, 0 to 1 Percent Slopes	4	48	0.37	3	3	3
Bw	Butler Silt Loam, Terrace, 0 to 1 Percent Slopes	4	48	0.37	3	3	3
Co	Colo Silty Clay Loam, 0 to 2 Percent Slopes	5	38	0.28	3	3	3
Cp	Colo-Nodaway Silty Clay Loams, 0 to 2 Percent Slopes	5	38	0.28	3	3	3
Cr	Crete Silt Loam, Terrace, 0 to 1 Percent Slopes	4	48	0.37	3	3	3
CrB	Crete Silty Clay Loam, Terrace, 1 to 3 Percent Slopes	4	38	0.37	3	3	3
CrC	Crete Silty Clay Loam, Terrace, 3 to 6 Percent Slopes	4	38	0.37	3	2	2
CtB	Crete Variant Silty Clay Loam, 1 to 4 Percent Slopes	4	38	0.37	3	2	2
Ct	Crete Silt Loam, 0 to 2 Percent Slopes	4	48	0.37	3	3	3
DcD	Dickinson Fine Sandy Loam, 6 to 11 Percent Slopes	4	86	0.2	3	2	2
DcD2	Dickinson Fine Sandy Loam, 6 to 11 Percent Slopes, Eroded	4	86	0.2	3	2	2
Fm	Fillmore Silt Loam, 0 to 1 Percent Slopes	4	48	0.37	3	3	3
GeD	Geary Silty Clay Loam, 6 to 11 Percent Slopes	5	48	0.32	3	2	2
GeD2	Geary Silty Clay Loam, 6 to 11 Percent Slopes, Eroded	5	48	0.32	3	2	2
HeF	Hedville Sandy Loam, 6 to 30 Percent Slopes	2	86	0.2	1	1	1
JfC	Judson Fine Sandy Loam, 2 to 6 Percent Slopes	5	86	0.2	3	3	3
JuC	Judson Silt Loam, 2 to 6 Percent Slopes	5	48	0.28	3	2	2
Ke	Kennebec Silt Loam, 0 to 2 Percent Slopes	5	48	0.32	3	3	3
Lm	Lamo Silty Clay Loam, 0 to 2 Percent Slopes	5	38	0.32	3	3	3
McD	Malcolm Silt Loam, 6 to 11 Percent Slopes	5	56	0.32	3	2	2
McF	Malcolm Silt Loam, 11 to 25 Percent Slopes	5	56	0.32	3	1	1
MeC2	Mayberry Silty Clay Loam, 2 to 7 Percent Slopes, Eroded	4	48	0.37	3	2	2
MeD2	Mayberry Silty Clay Loam, 7 to 11 Percent Slopes, Eroded	4	48	0.37	3	1	1



Public Land Survey and Ownership Maps

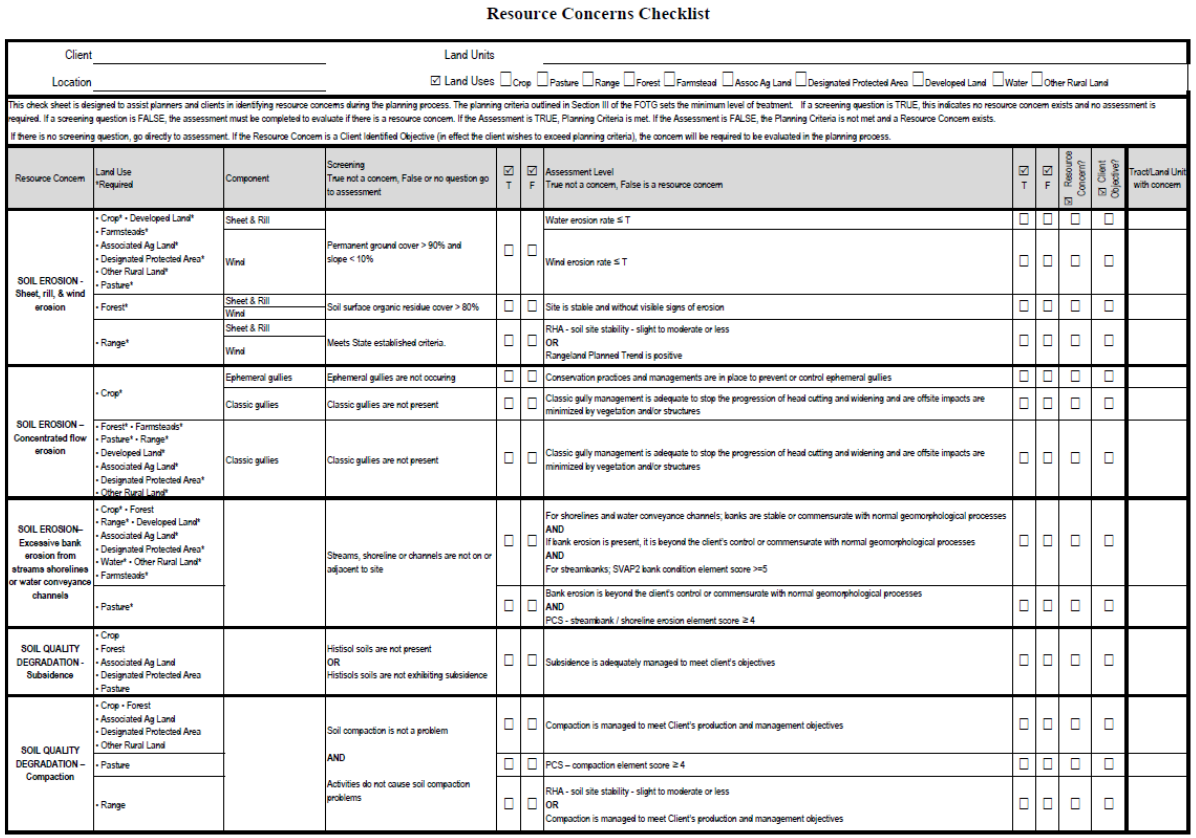




Resource Concern Checklists

National Version

All Landuses



Resource Concerns Checklist

Client _____ Land Units _____

Location _____ ☑ Land Uses ☐ Crop ☐ Pasture ☐ Range ☐ Forest ☐ Farmstead ☐ Assoc Ag Land ☐ Designated Protected Area ☐ Developed Land ☐ Water ☐ Other Rural Land

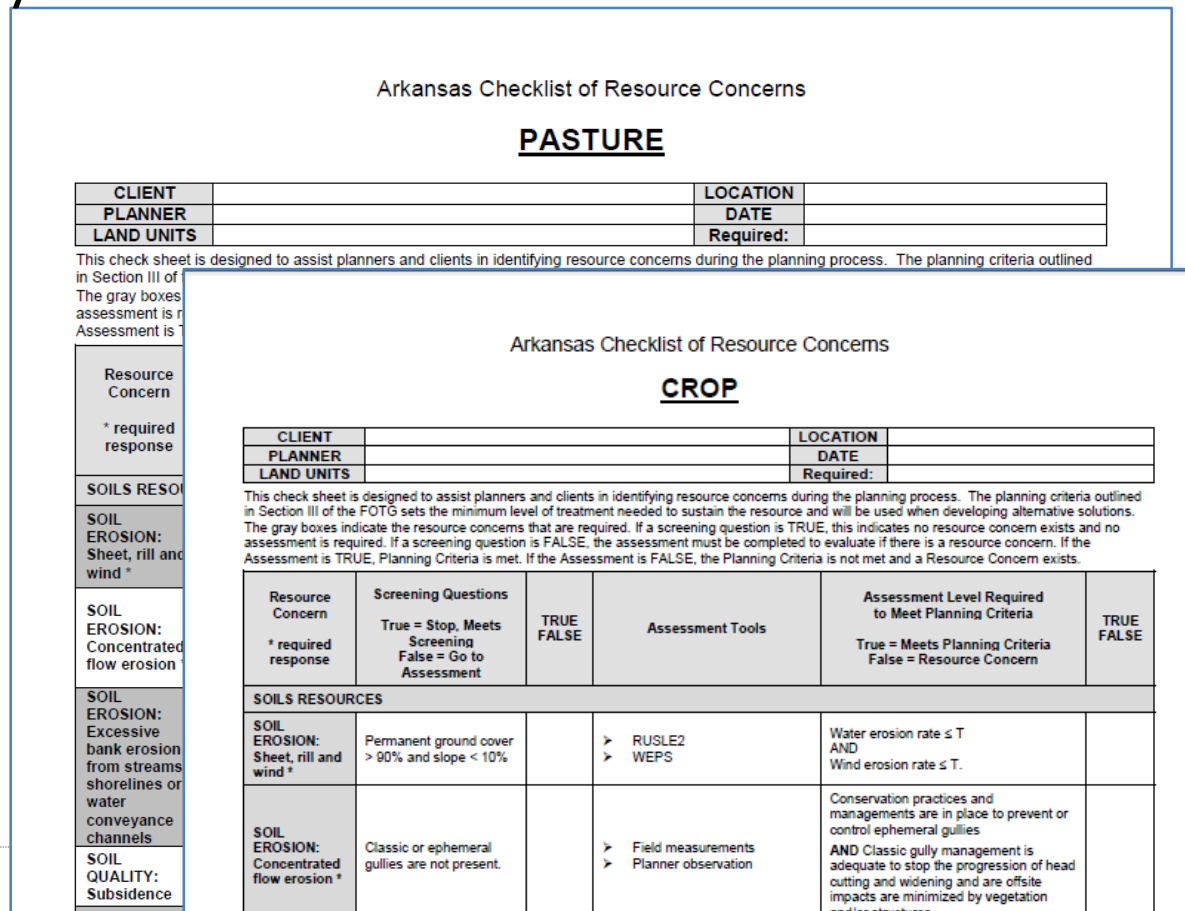
This check sheet is designed to assist planners and clients in identifying resource concerns during the planning process. The planning criteria outlined in Section III of the FOTG sets the minimum level of treatment. If a screening question is TRUE, this indicates no resource concern exists and no assessment is required. If a screening question is FALSE, the assessment must be completed to evaluate if there is a resource concern. If the Assessment is TRUE, Planning Criteria is met. If the Assessment is FALSE, the Planning Criteria is not met and a Resource Concern exists.

If there is no screening question, go directly to assessment. If the Resource Concern is a Client Identified Objective (in effect the client wishes to exceed planning criteria), the concern will be required to be evaluated in the planning process.

Resource Concern	Land Use *Required	Component	Screening True not a concern, False or no question go to assessment	☑ T	☑ F	Assessment Level True not a concern, False is a resource concern	☑ T	☑ F	☑ Resource Concern?	☑ Client Objective?	Tract/Land Unit with concern
SOIL EROSION - Sheet, rill, & wind erosion	• Crop* • Developed Land* • Farmsteads* • Associated Ag Land* • Designated Protected Area* • Other Rural Land* • Pasture*	Sheet & Rill	Permanent ground cover > 90% and slope < 10%	☐	☐	Water erosion rate ≤ T	☐	☐	☐	☐	
		Wind				Wind erosion rate ≤ T	☐	☐	☐	☐	
	• Forest*	Sheet & Rill / Wind	Soil surface organic residue cover > 80%	☐	☐	Site is stable and without visible signs of erosion	☐	☐	☐	☐	
	• Range*	Sheet & Rill / Wind	Meets State established criteria.	☐	☐	RHA - soil site stability - slight to moderate or less OR Rangeland Planned Trend is positive	☐	☐	☐	☐	
SOIL EROSION – Concentrated flow erosion	• Crop*	Ephemeral gullies	Ephemeral gullies are not occuring	☐	☐	Conservation practices and managements are in place to prevent or control ephemeral gullies	☐	☐	☐	☐	
		Classic gullies	Classic gullies are not present	☐	☐	Classic gully management is adequate to stop the progression of head cutting and widening and are offsite impacts are minimized by vegetation and/or structures	☐	☐	☐	☐	
	• Forest* • Farmsteads* • Pasture* • Range* • Developed Land* • Associated Ag Land* • Designated Protected Area* • Other Rural Land*	Classic gullies	Classic gullies are not present	☐	☐	Classic gully management is adequate to stop the progression of head cutting and widening and are offsite impacts are minimized by vegetation and/or structures	☐	☐	☐	☐	
SOIL EROSION– Excessive bank erosion from streams shorelines or water conveyance channels	• Crop* • Range* • Developed Land* • Associated Ag Land* • Designated Protected Area* • Water* • Other Rural Land* • Farmsteads*		Streams, shoreline or channels are not on or adjacent to site	☐	☐	For shorelines and water conveyance channels; banks are stable or commensurate with normal geomorphological processes AND If bank erosion is present, it is beyond the client's control or commensurate with normal geomorphological processes AND For streambanks; SVAP2 bank condition element score >=5	☐	☐	☐	☐	
	• Pasture*			☐	☐	Bank erosion is beyond the client's control or commensurate with normal geomorphological processes AND PCS - streambank / shoreline erosion element score ≥ 4	☐	☐	☐	☐	
SOIL QUALITY DEGRADATION - Subsidence	• Crop • Forest • Associated Ag Land • Designated Protected Area • Pasture		Histisol soils are not present OR Histisols soils are not exhibiting subsidence	☐	☐	Subsidence is adequately managed to meet client's objectives	☐	☐	☐	☐	
SOIL QUALITY DEGRADATION – Compaction	• Crop • Forest • Associated Ag Land • Designated Protected Area • Other Rural Land		Soil compaction is not a problem	☐	☐	Compaction is managed to meet Client's production and management objectives	☐	☐	☐	☐	
	• Pasture		AND	☐	☐	PCS – compaction element score ≥ 4	☐	☐	☐	☐	
	• Range		Activities do not cause soil compaction problems	☐	☐	RHA - soil site stability - slight to moderate or less OR Compaction is managed to meet Client's production and management objectives	☐	☐	☐	☐	

State Developed Version

By Landuse



Arkansas Checklist of Resource Concerns

PASTURE

CLIENT		LOCATION	
PLANNER		DATE	
LAND UNITS		Required:	

This check sheet is designed to assist planners and clients in identifying resource concerns during the planning process. The planning criteria outlined in Section III of t
The gray boxes
assessment is r
Assessment is T

Resource Concern * required response
SOILS RESOU
SOIL EROSION: Sheet, rill and wind *
SOIL EROSION: Concentrated flow erosion *
SOIL EROSION: Excessive bank erosion from streams shorelines or water conveyance channels
SOIL QUALITY: Subsidence

Arkansas Checklist of Resource Concerns

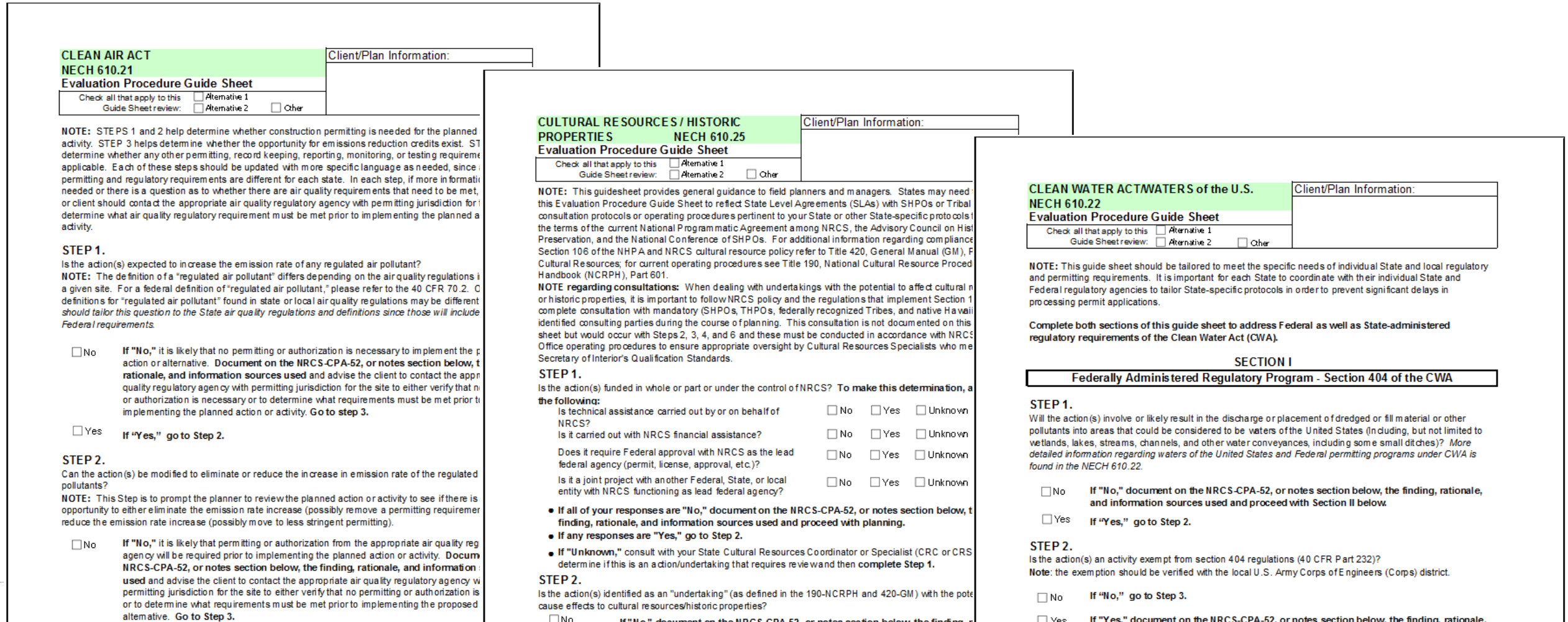
CROP

CLIENT		LOCATION	
PLANNER		DATE	
LAND UNITS		Required:	

This check sheet is designed to assist planners and clients in identifying resource concerns during the planning process. The planning criteria outlined in Section III of the FOTG sets the minimum level of treatment needed to sustain the resource and will be used when developing alternative solutions. The gray boxes indicate the resource concerns that are required. If a screening question is TRUE, this indicates no resource concern exists and no assessment is required. If a screening question is FALSE, the assessment must be completed to evaluate if there is a resource concern. If the Assessment is TRUE, Planning Criteria is met. If the Assessment is FALSE, the Planning Criteria is not met and a Resource Concern exists.

Resource Concern * required response	Screening Questions True = Stop, Meets Screening False = Go to Assessment	TRUE FALSE	Assessment Tools	Assessment Level Required to Meet Planning Criteria True = Meets Planning Criteria False = Resource Concern	TRUE FALSE
SOILS RESOURCES					
SOIL EROSION: Sheet, rill and wind *	Permanent ground cover > 90% and slope < 10%		➢ RUSLE2 ➢ WEPS	Water erosion rate ≤ T AND Wind erosion rate ≤ T.	
SOIL EROSION: Concentrated flow erosion *	Classic or ephemeral gullies are not present.		➢ Field measurements ➢ Planner observation	Conservation practices and managements are in place to prevent or control ephemeral gullies **AND** Classic gully management is adequate to stop the progression of head cutting and widening and are offsite impacts are minimized by vegetation	

Special Environmental Concern Guidesheets



CLEAN AIR ACT
NECH 610.21
Evaluation Procedure Guide Sheet

Client/Plan Information:

Check all that apply to this Guide Sheet review: ☐ Alternative 1 ☐ Alternative 2 ☐ Other

NOTE: STEPS 1 and 2 help determine whether construction permitting is needed for the planned activity. STEP 3 helps determine whether the opportunity for emissions reduction credits exist. ST determine whether any other permitting, record keeping, reporting, monitoring, or testing requireme applicable. Each of these steps should be updated with more specific language as needed, since permitting and regulatory requirements are different for each state. In each step, if more informati needed or there is a question as to whether there are air quality requirements that need to be met, or client should contact the appropriate air quality regulatory agency with permitting jurisdiction for determine what air quality regulatory requirement must be met prior to implementing the planned a activity.

STEP 1.

Is the action(s) expected to increase the emission rate of any regulated air pollutant?

NOTE: The definition of a "regulated air pollutant" differs depending on the air quality regulations i a given site. For a federal definition of "regulated air pollutant," please refer to the 40 CFR 70.2. C definitions for "regulated air pollutant" found in state or local air quality regulations may be different *should tailor this question to the State air quality regulations and definitions since those will include Federal requirements.*

☐ No — **If "No,"** it is likely that no permitting or authorization is necessary to implement the p action or alternative. **Document on the NRCS-CPA-52, or notes section below, t rationale, and information sources used** and advise the client to contact the appr quality regulatory agency with permitting jurisdiction for the site to either verify that n or authorization is necessary or to determine what requirements must be met prior t implementing the planned action or activity. **Go to step 3.**

☐ Yes — **If "Yes," go to Step 2.**

STEP 2.

Can the action(s) be modified to eliminate or reduce the increase in emission rate of the regulated pollutants?

NOTE: This Step is to prompt the planner to review the planned action or activity to see if there is opportunity to either eliminate the emission rate increase (possibly remove a permitting requiremer reduce the emission rate increase (possibly move to less stringent permitting).

☐ No — **If "No,"** it is likely that permitting or authorization from the appropriate air quality reg agency will be required prior to implementing the planned action or activity. **Docum NRCS-CPA-52, or notes section below, the finding, rationale, and information used** and advise the client to contact the appropriate air quality regulatory agency w permitting jurisdiction for the site to either verify that no permitting or authorization is or to determine what requirements must be met prior to implementing the proposed alternative. **Go to Step 3.**

CULTURAL RESOURCES / HISTORIC PROPERTIES NECH 610.25
Evaluation Procedure Guide Sheet

Client/Plan Information:

Check all that apply to this Guide Sheet review: ☐ Alternative 1 ☐ Alternative 2 ☐ Other

NOTE: This guidesheet provides general guidance to field planners and managers. States may need this Evaluation Procedure Guide Sheet to reflect State Level Agreements (SLAs) with SHPOs or Tribal consultation protocols or operating procedures pertinent to your State or other State-specific protocols the terms of the current National Programmatic Agreement among NRCS, the Advisory Council on Hist Preservation, and the National Conference of SHPOs. For additional information regarding compliance Section 106 of the NHPA and NRCS cultural resource policy refer to Title 420, General Manual (GM), P Cultural Resources; for current operating procedures see Title 190, National Cultural Resource Proced Handbook (NCRPH), Part 601.

NOTE regarding consultations: When dealing with undertakings with the potential to affect cultural n or historic properties, it is important to follow NRCS policy and the regulations that implement Section 1 complete consultation with mandatory (SHPOs, THPOs, federally recognized Tribes, and native Hawaii identified consulting parties during the course of planning. This consultation is not documented on this sheet but would occur with Steps 2, 3, 4, and 6 and these must be conducted in accordance with NRCS Office operating procedures to ensure appropriate oversight by Cultural Resources Specialists who me Secretary of Interior's Qualification Standards.

STEP 1.

Is the action(s) funded in whole or part or under the control of NRCS? **To make this determination, a the following:**

Is technical assistance carried out by or on behalf of NRCS?	☐ No	☐ Yes	☐ Unknown
Is it carried out with NRCS financial assistance?	☐ No	☐ Yes	☐ Unknown
Does it require Federal approval with NRCS as the lead federal agency (permit, license, approval, etc.)?	☐ No	☐ Yes	☐ Unknown
Is it a joint project with another Federal, State, or local entity with NRCS functioning as lead federal agency?	☐ No	☐ Yes	☐ Unknown

- **If all of your responses are "No," document on the NRCS-CPA-52, or notes section below, t finding, rationale, and information sources used and proceed with planning.**
- **If any responses are "Yes," go to Step 2.**
- **If "Unknown,"** consult with your State Cultural Resources Coordinator or Specialist (CRC or CRS determine if this is an action/undertaking that requires review and then **complete Step 1.**

STEP 2.

Is the action(s) identified as an "undertaking" (as defined in the 190-NCRPH and 420-GM) with the pote cause effects to cultural resources/historic properties?

☐ No — **If "No," document on the NRCS-CPA-52, or notes section below, the finding, r**

CLEAN WATER ACT/WATERS of the U.S.
NECH 610.22
Evaluation Procedure Guide Sheet

Client/Plan Information:

Check all that apply to this Guide Sheet review: ☐ Alternative 1 ☐ Alternative 2 ☐ Other

NOTE: This guide sheet should be tailored to meet the specific needs of individual State and local regulatory and permitting requirements. It is important for each State to coordinate with their individual State and Federal regulatory agencies to tailor State-specific protocols in order to prevent significant delays in processing permit applications.

Complete both sections of this guide sheet to address Federal as well as State-administered regulatory requirements of the Clean Water Act (CWA).

SECTION I
Federally Administered Regulatory Program - Section 404 of the CWA

STEP 1.

Will the action(s) involve or likely result in the discharge or placement of dredged or fill material or other pollutants into areas that could be considered to be waters of the United States (including, but not limited to wetlands, lakes, streams, channels, and other water conveyances, including some small ditches)? *More detailed information regarding waters of the United States and Federal permitting programs under CWA is found in the NECH 610.22.*

☐ No — **If "No," document on the NRCS-CPA-52, or notes section below, the finding, rationale, and information sources used and proceed with Section II below.**

☐ Yes — **If "Yes," go to Step 2.**

STEP 2.

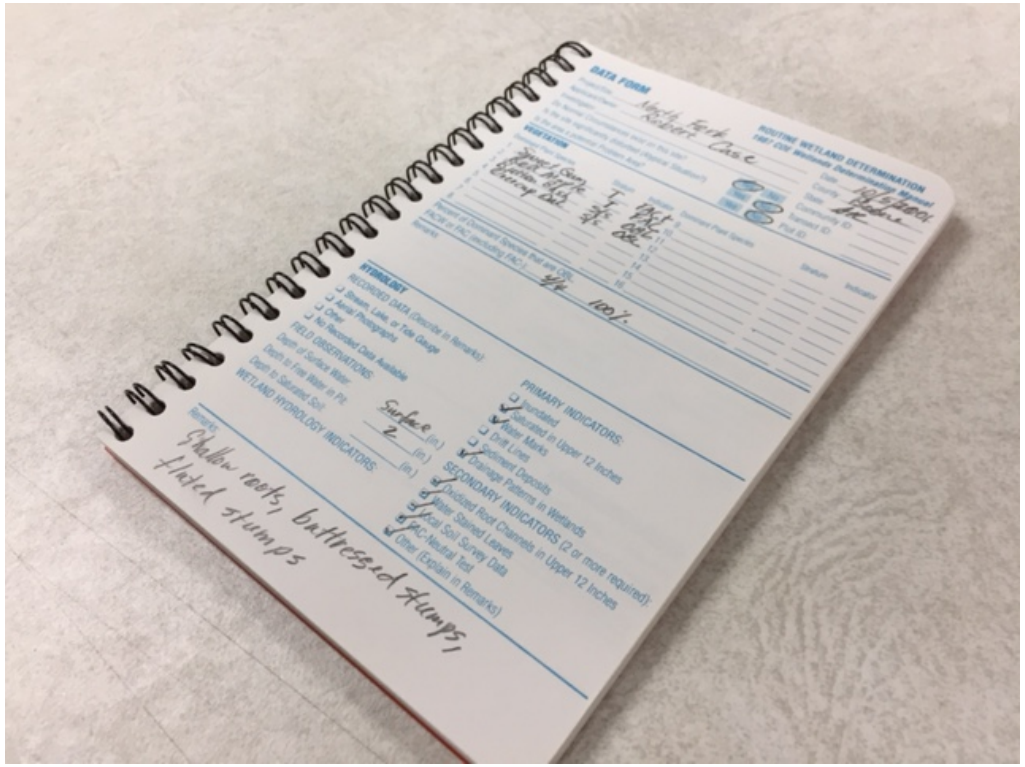
Is the action(s) an activity exempt from section 404 regulations (40 CFR Part 232)?

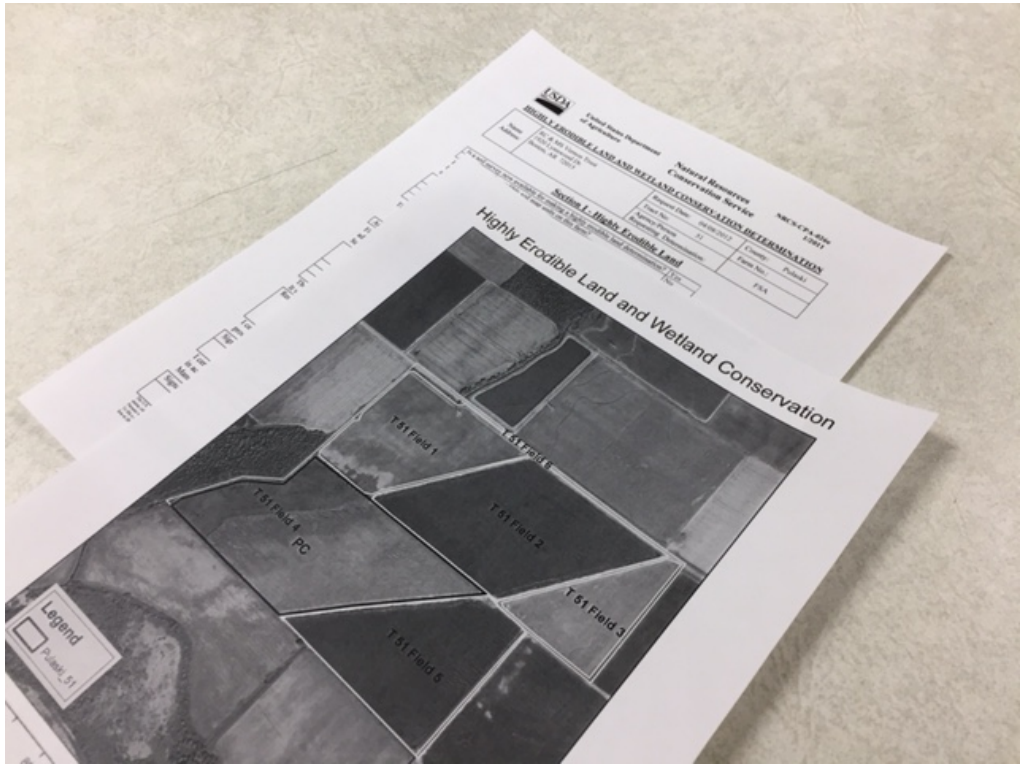
Note: the exemption should be verified with the local U.S. Army Corps of Engineers (Corps) district.

☐ No — **If "No," go to Step 3.**

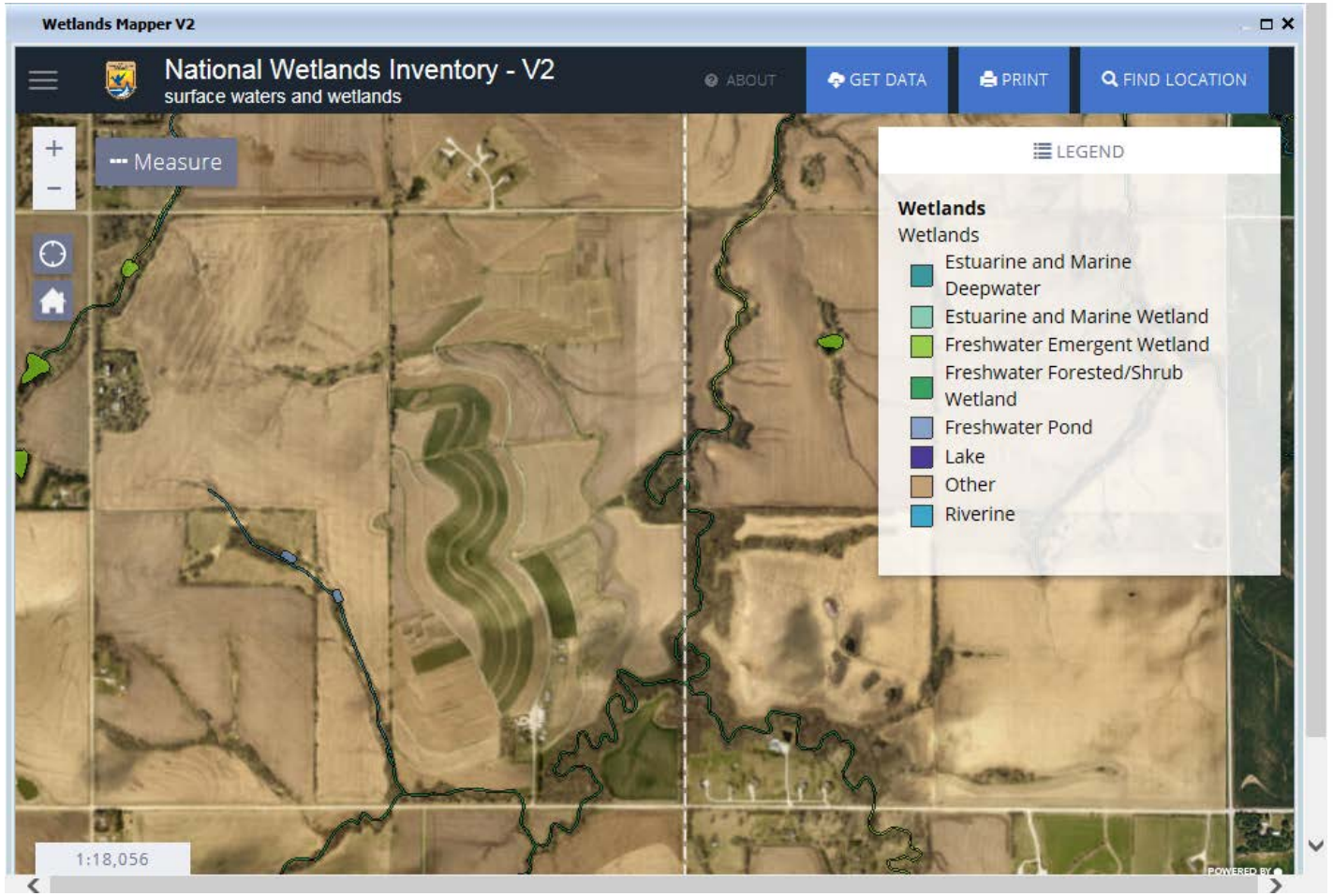
☐ Yes — **If "Yes," document on the NRCS-CPA-52, or notes section below, the finding, rationale,**

Wetland Inventories and Determinations

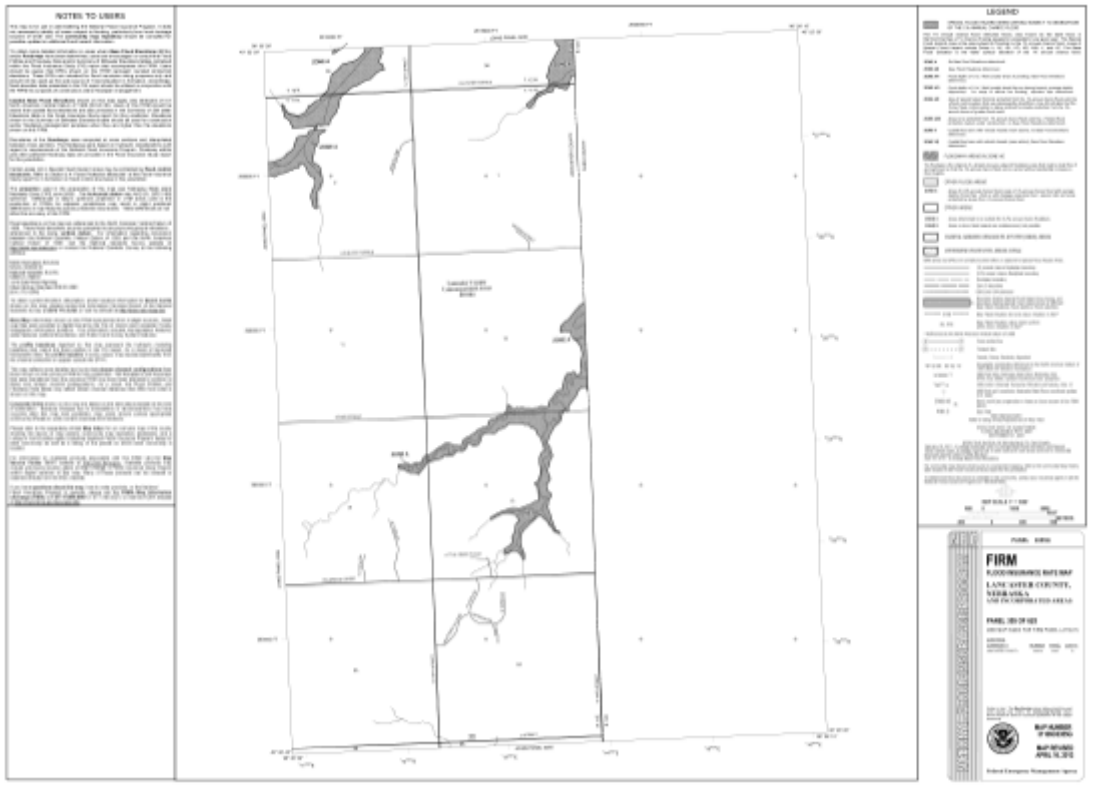


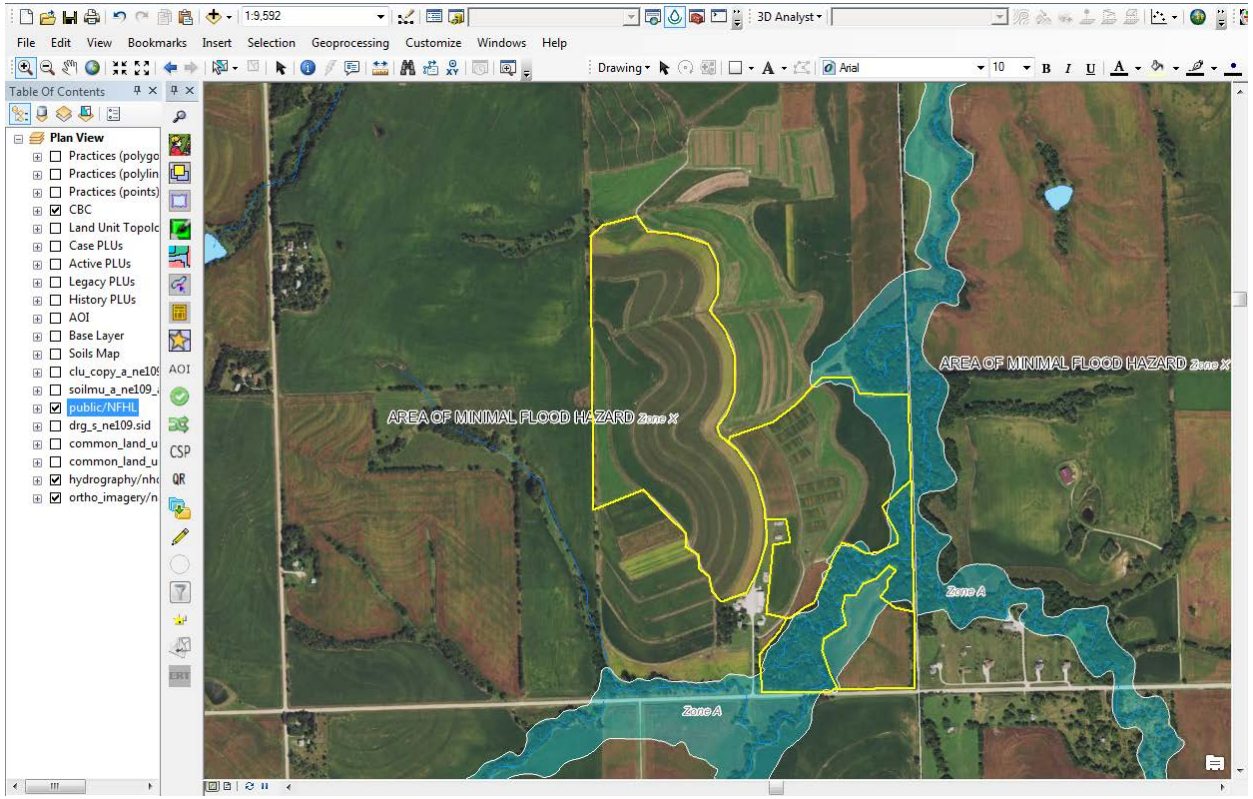


National Wetland Inventory Maps



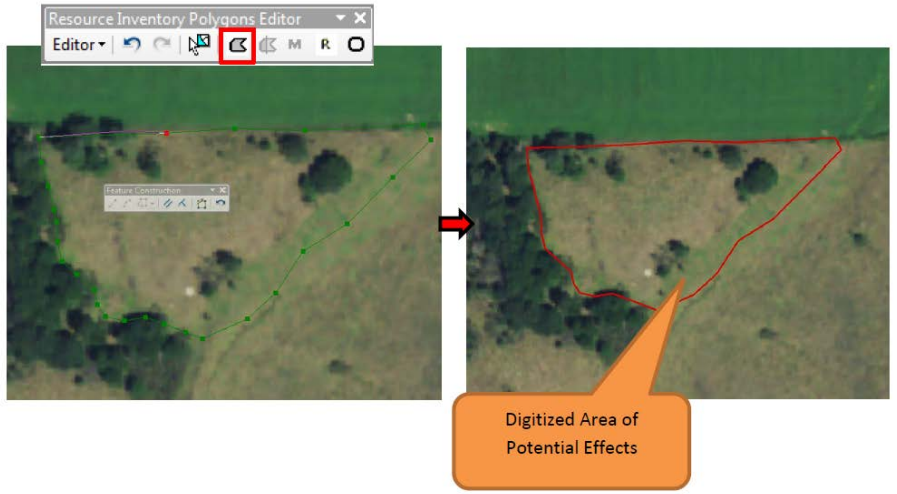
Flood Plain maps

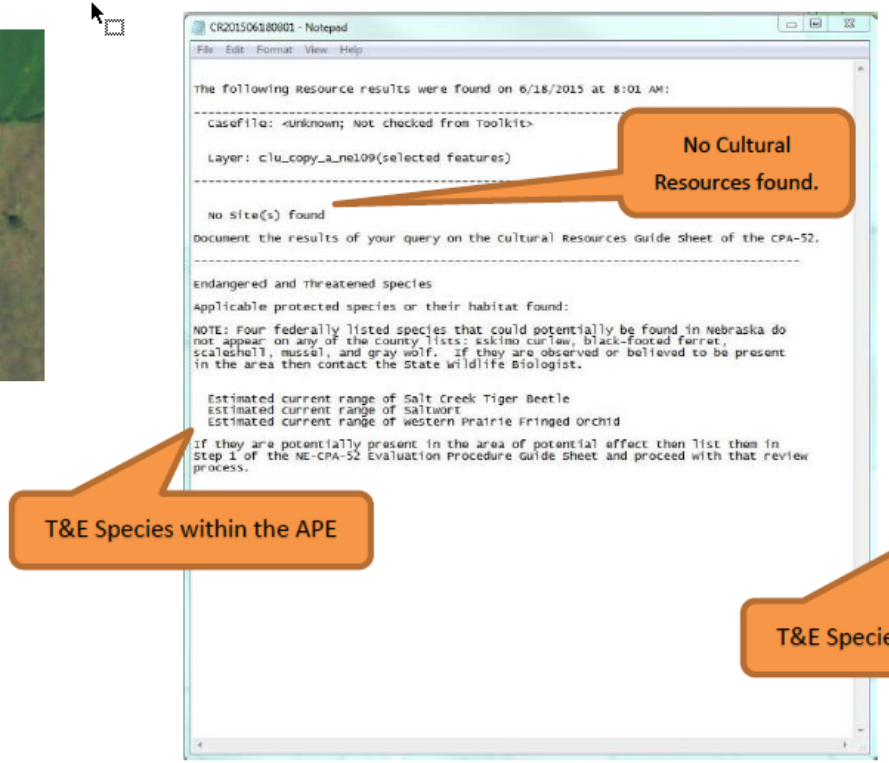


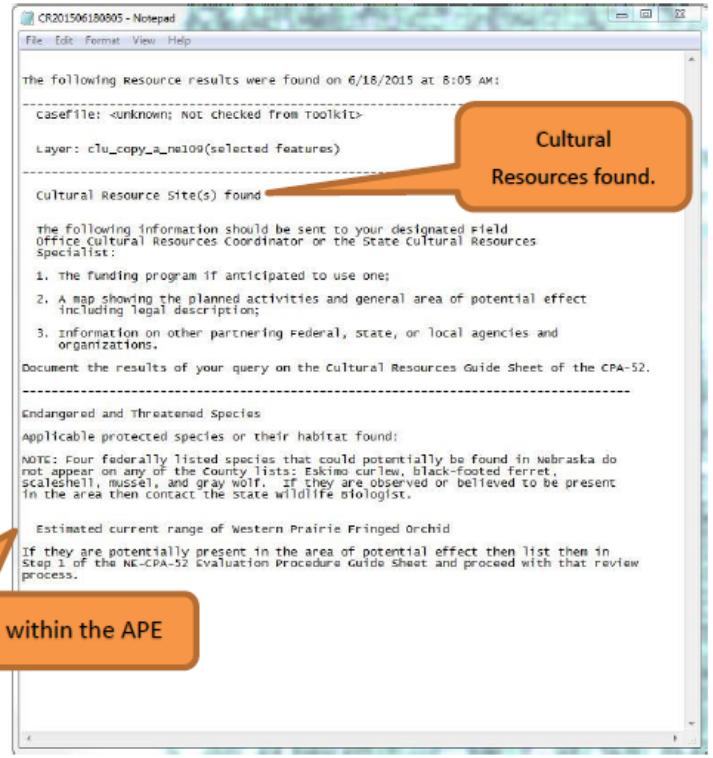


Cultural Resources and T&E Species Information

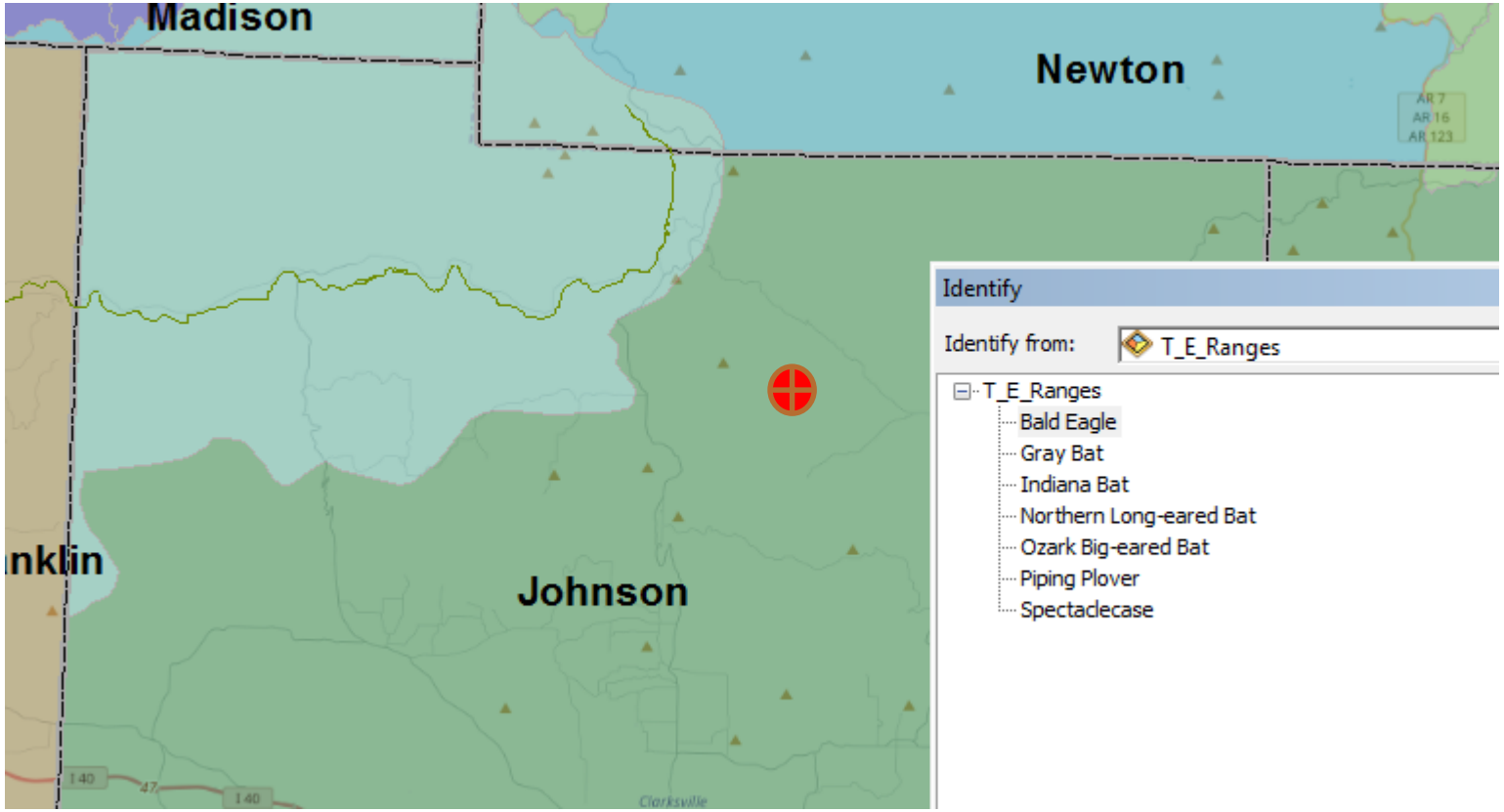
- Environmental Compliance Tools





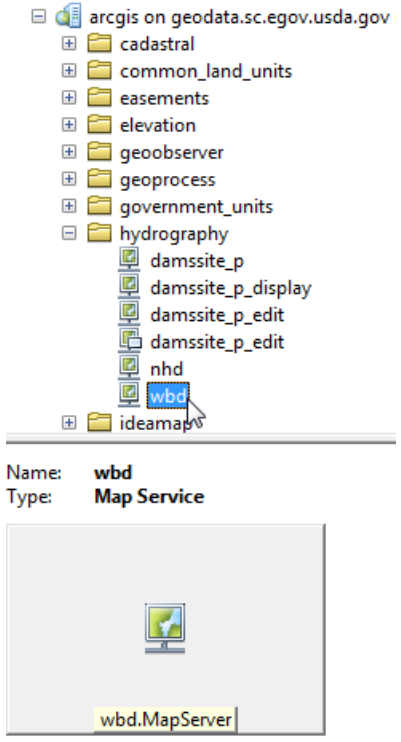


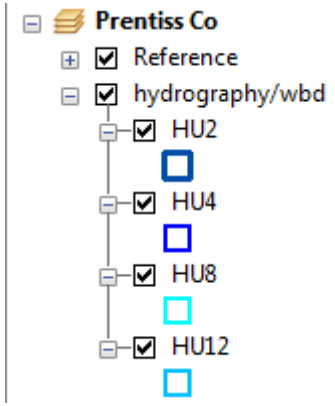
Endangered and Threatened Species



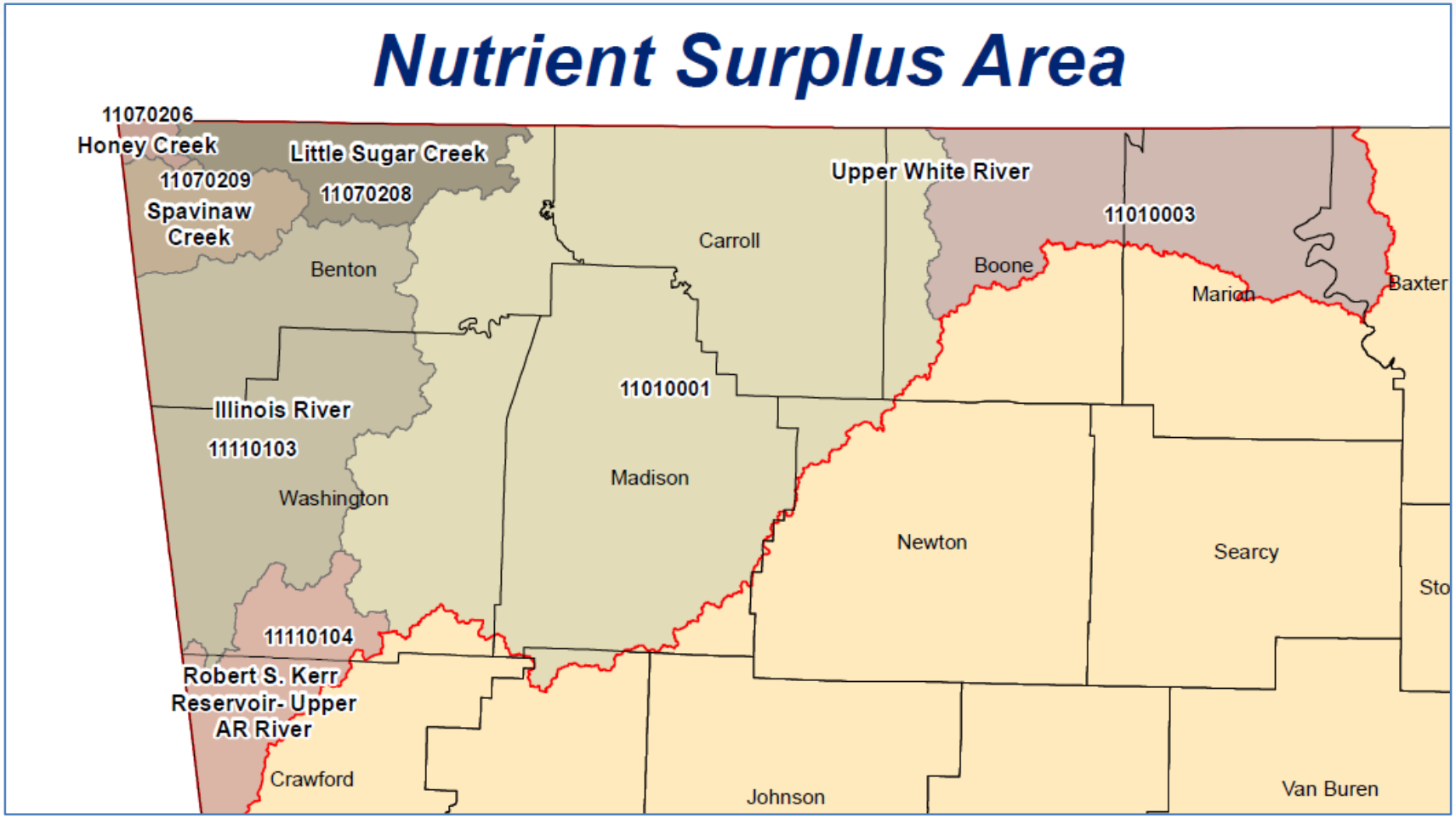
Watershed Designation Maps

- Web Map Service Available

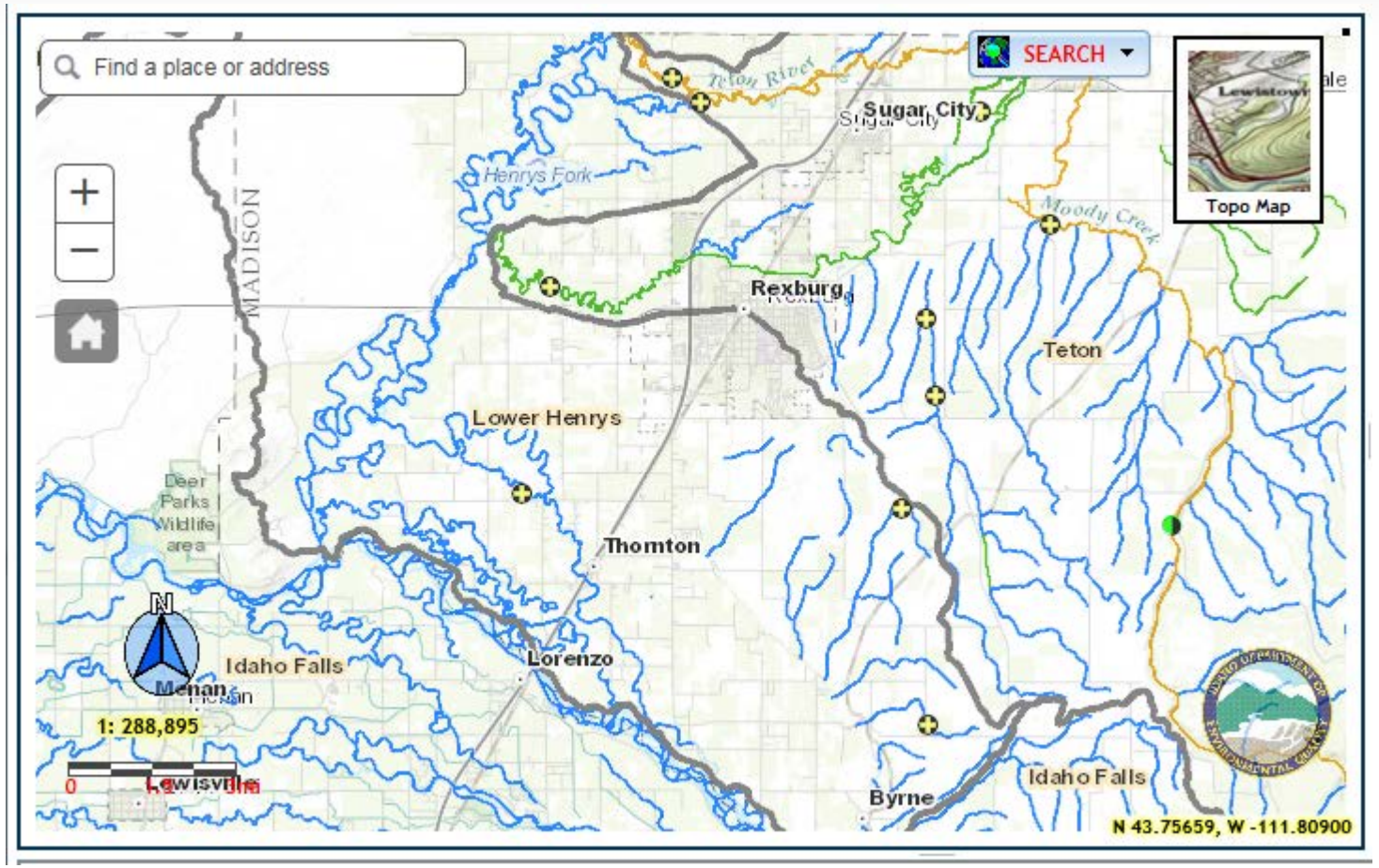


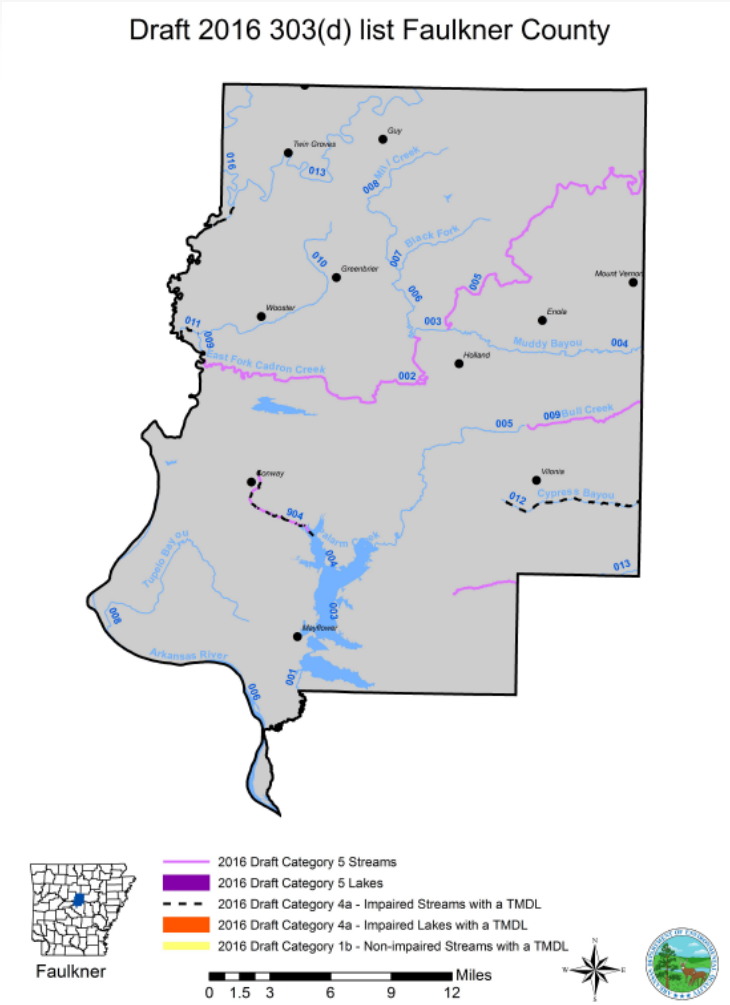


Watershed Designation Maps



303(d) Listed Streams





Air Quality Non Attainment Areas

EPA United States Environmental Protection Agency

Green Book

Contact Us

- 8-Hour Ozone (2008)
- 8-Hour Ozone (1997)
- 1-Hour Ozone (1979)
- PM-2.5 (2012)
- PM-2.5 (2006)
- PM-2.5 (1997)
- PM-10 (1987)
- Sulfur Dioxide (2010)
- Sulfur Dioxide (1971)
- Lead (2008)
- Lead (1978)
- Carbon Monoxide (1971)
- Nitrogen Dioxide (1971)
- Multi-Pollutant
- Downloads
- FAQ
- Related Links
- Recent Updates

You are here: EPA Home > Current Nonattainment Counties for All Criteria Pollutants

Current Nonattainment Counties for All Criteria Pollutants

As of February 13, 2017

"Part County NA" means only a portion of the county is designated nonattainment (NA). The 8-hour Ozone (1997) standard was revoked on April 6, 2015 and the 1-hour Ozone (1979) standard was revoked on June 15, 2005.

Listed by State, County, NAAQS * Part County NA NA Area Name (Classification, if applicable)

ALABAMA

Pike Co

Lead (2008) * Troy, AL

ALASKA

Fairbanks North Star Borough

PM-2.5 (2006) * Fairbanks, AK - (Moderate)

ARIZONA

Cochise Co

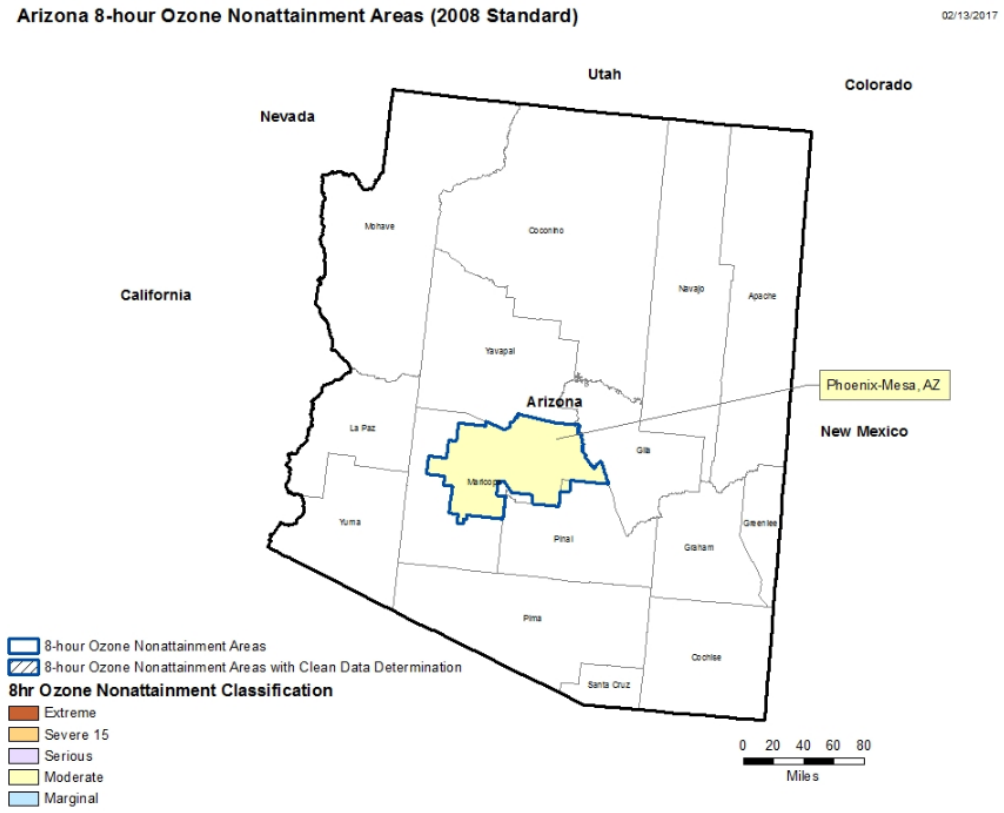
PM-10 (1987) * Paul Spur/Douglas (Cochise County), AZ - (Moderate)

Gila Co

Lead (2008) * Hayden, AZ

PM-10 (1987) * Hayden, AZ - (Moderate)

PM-10 (1987) * Miami, AZ - (Moderate)



Land Use Specific Inventory Sheets

Crop Rotation and Management

NRCS Natural Resources Conservation Service

The ***Crop Rotation and Management*** worksheet captures information regarding the crops you grow and the crop rotation used on your operation. Please fill out this form if you have cropland or hay land that has a rotational sequence. Follow the example below wh
page.

EXAMPLE

Worksheet C1: **Crop Rotation and Manage**

Field Number or Name	Typical Rota				
	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
3 & 4	Perennial/Rye Grass Seed				Crimson Clover
5, 6, & 7	Alfalfa			Potatoes	Winter Wheat
1, 2, & 8	Winter Wheat	Spring Barley	Summer Fallow		
all	Winter Wheat	Winter Wheat	Carrots, Seed	Winter Wheat	Orchard Grass

Additional Comments or Observations:

Crop Residue Management

NRCS Natural Resources Conservation Service

The ***Crop Residue Management*** worksheet captures informa
fields. Complete this form only if you have cropland. This wo
other forage crops. You do not need to complete this worksh
orchards, vineyards, Christmas trees or berries please skip th
Residue Management: Orchards, Vineyards, Christmas Tre

Please follow the example below when entering your inform

EXAMPLE

Worksheet C2: **Crop and Residue Manageme**

1	2	3	4
Crop	Field/Unit	Planting Date	Harvest Date
Winter Wheat	103, Lower	10/1 to 10/5	8/1 to 8/10
Perennial Rye Grass for seed	216	8/20	7/5 to 7/15
Crimson Clover for seed	316, 26	8/15	6/25
Spring Barley	16, 18, 12	4/1	7/20
Corn, Field	3,6,25	5/10	10/15 to 10/20

Producer Information

Natural Resources Conservation Service NRCS

The following information is needed by your conservation planner to develop a quality Conservation Plan. The NRCS Privacy Statement is available for you to fill out on pages 14 and 15. The Privacy
rovide in the Conservation Records packet remains
ources Conservation Service.

Irrigation Inventory Worksheets IR1, IR2 & IR3

NRCS Natural Resources Conservation Service

Complete the ***Irrigation Inventory*** only if you use irrigation to manage your crop, hay or pasture land.

To complete the ***Water Supply Inventory Worksheet,*** list your field numbers or names with the corresponding information. The subsequent worksheets will help you develop an overall summary of your irrigation system.

EXAMPLE

Worksheet IR1: **Water Supply Inventory**

Field Number	Acres	Crops Grown	Soil Type	Irrigation System
1	160	Alfalfa	Sandy Loam	Wheeline

EXAMPLE

Worksheet IR2: **Water Source**

Select the source for irrigation water on your farm. Indicate all sources if more than one source is utilized.

Water Source	Check all that apply.
Well (Note the number of wells utilized)	
Stream	X
Lake or Pond	
Other Sources Used (Please explain)	

EXAMPLE

Worksheet IR3: **Water Right/Allocation**

Indicate the amount of water allocated for your operation along with the flow rate in the worksheet below.

Water Right/Allocation

Livestock Inventory

NRCS Natural Resources Conservation Service

The next two worksheets will help you document your herd inventory needs (demands) and corresponding forage and roughage inventory available (supply). This will help you and your conservation planner determine whether your grazing system is balanced for the most sustainable use of your grazing land.

The ***Livestock Inventory Worksheet*** captures an overall description of your livestock operation, including the number of animals and the corresponding Animal Units (au). First, refer to Table G1 below to determine the appropriate Animal Unit Equivalents (aue) for your livestock or wildlife type. For example, the intake require
Animal Unit Mon
for one month. Y
of AUMs of forag
entering your inf
Animal Unit Equi

Table G1: **Ani**

Type o
1,000 lb
1200 lb
850 lb Repl
1,50
1,500
200 lb
C

EXAMPLE

Worksheet G1

Herd Designation	
Plains	
Heifers	
Wildlife	
Bulls	
To	

Forest Stand Description

NRCS Natural Resources Conservation Service

The following information will provide your conservation planner with the information needed to determine the condition of and conservation opportunities on your forest stand.

EXAMPLE

Worksheet F1: **Forest Stand Description**

List Your Management Units						
Management Units Number or Name	Total Acres	Forest Type	Age		Last Harvest	
			Uneven Aged (Enter age of oldest component)	Even Aged (Enter Year Planted)	Kind (PCT*, Selection, Clearcut)	Date
North Unit	35	Douglas Fir	-----	1987	PCT	2000
Unit 5	85	Douglas Fir	60	-----	Selection	1994

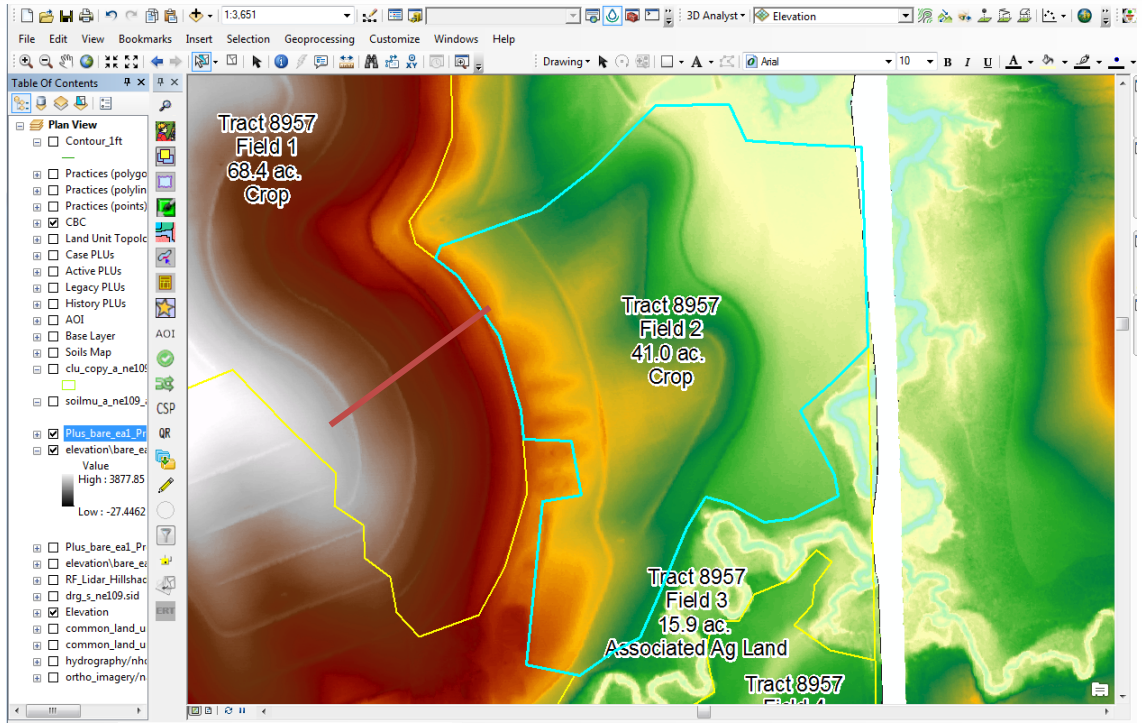
* PCT is Pre-Commercial Thin

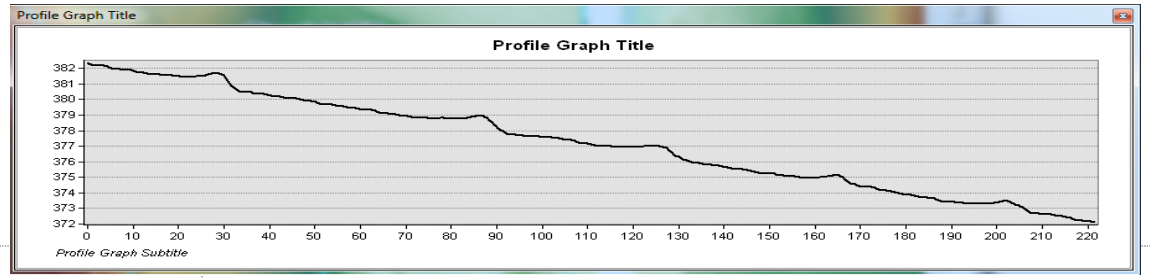
What other GIS information is Available?

- Elevation Data
- Derivatives
  - Hillshade images
  - Slope Maps
  - Contour Maps
- ArcMap 3D Analyst
- Other State Developed Tools

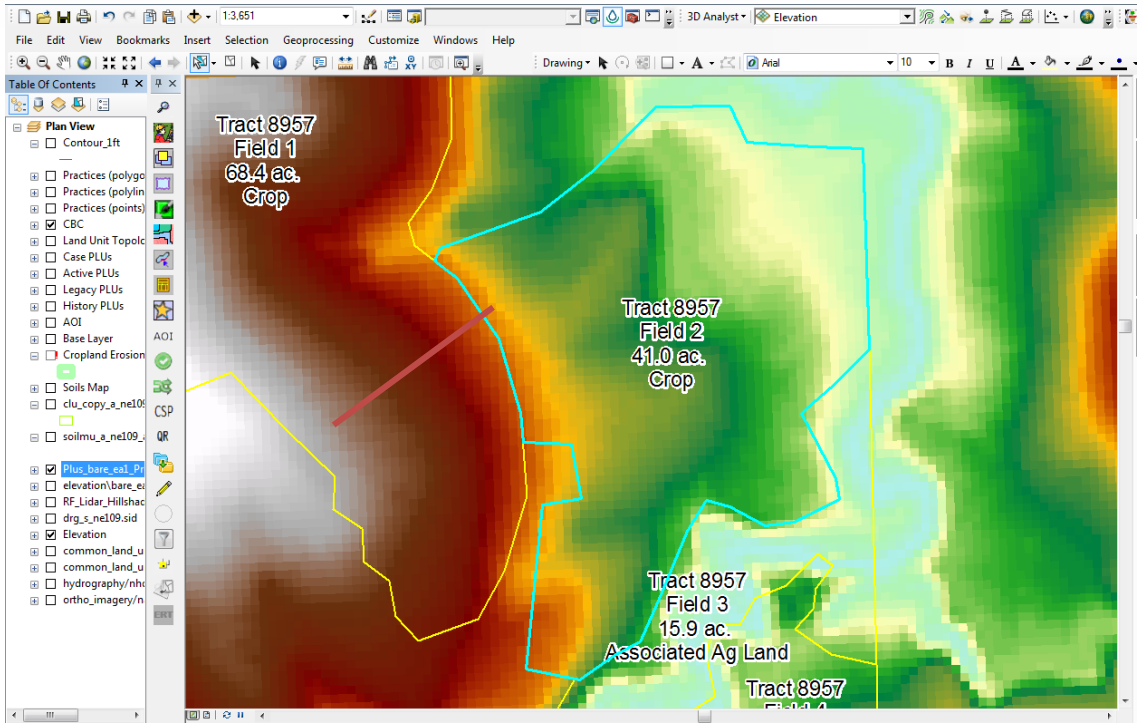
Elevation Data

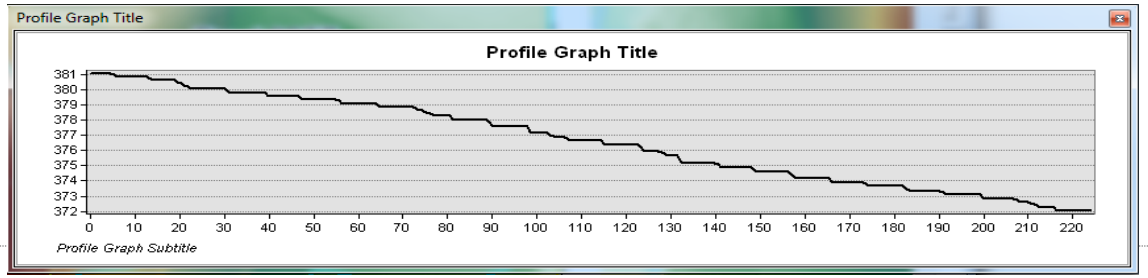
Lidar



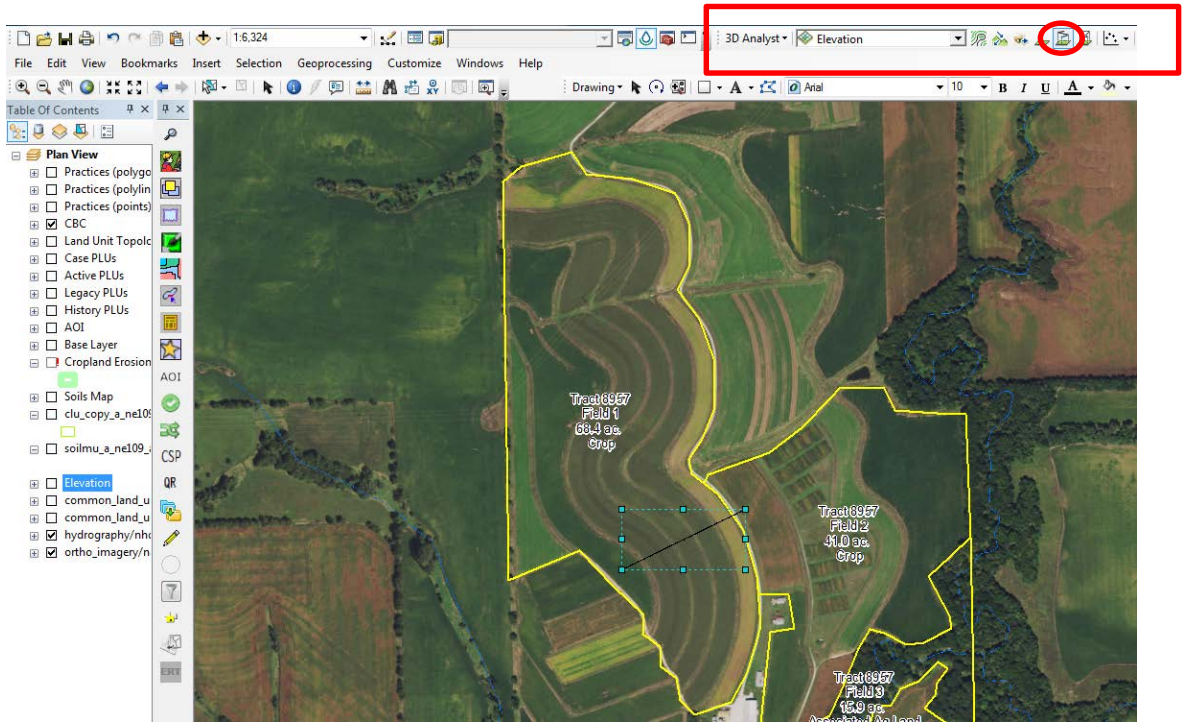


10m DEM

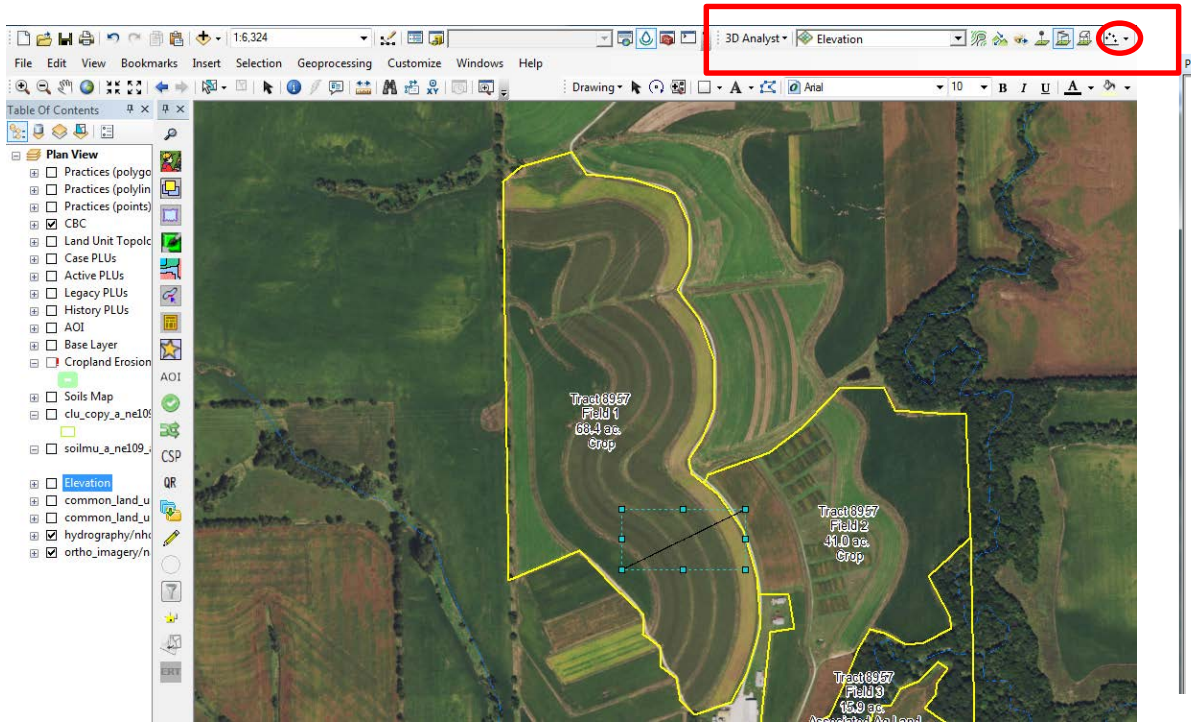


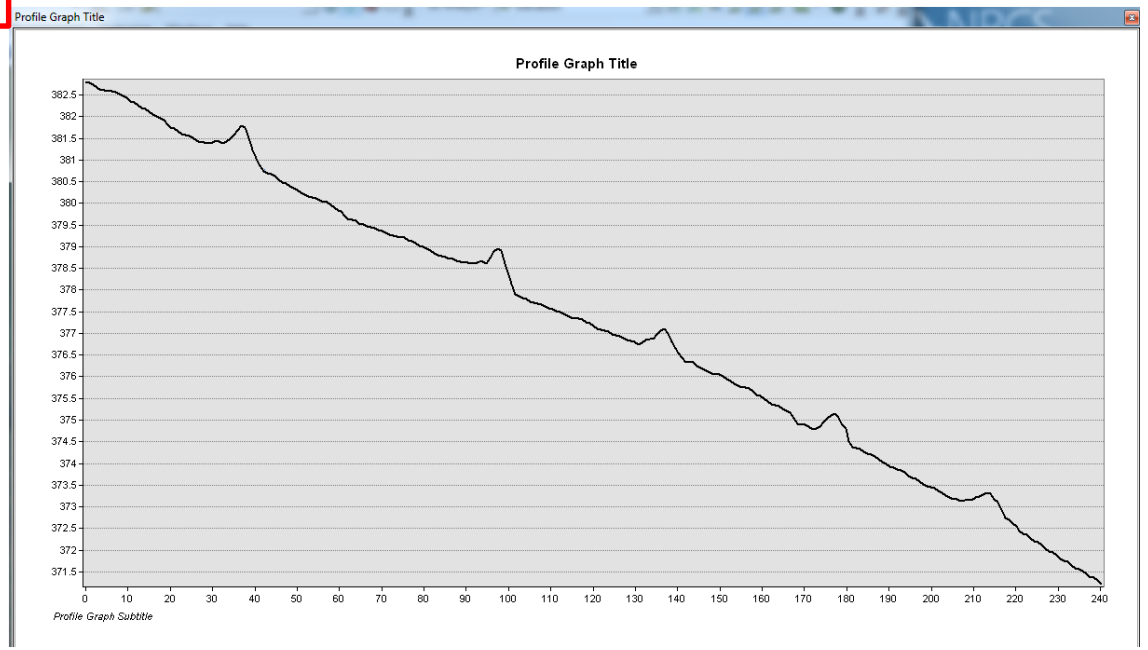


ArcMap 3D Analyst



ArcMap 3D Analyst





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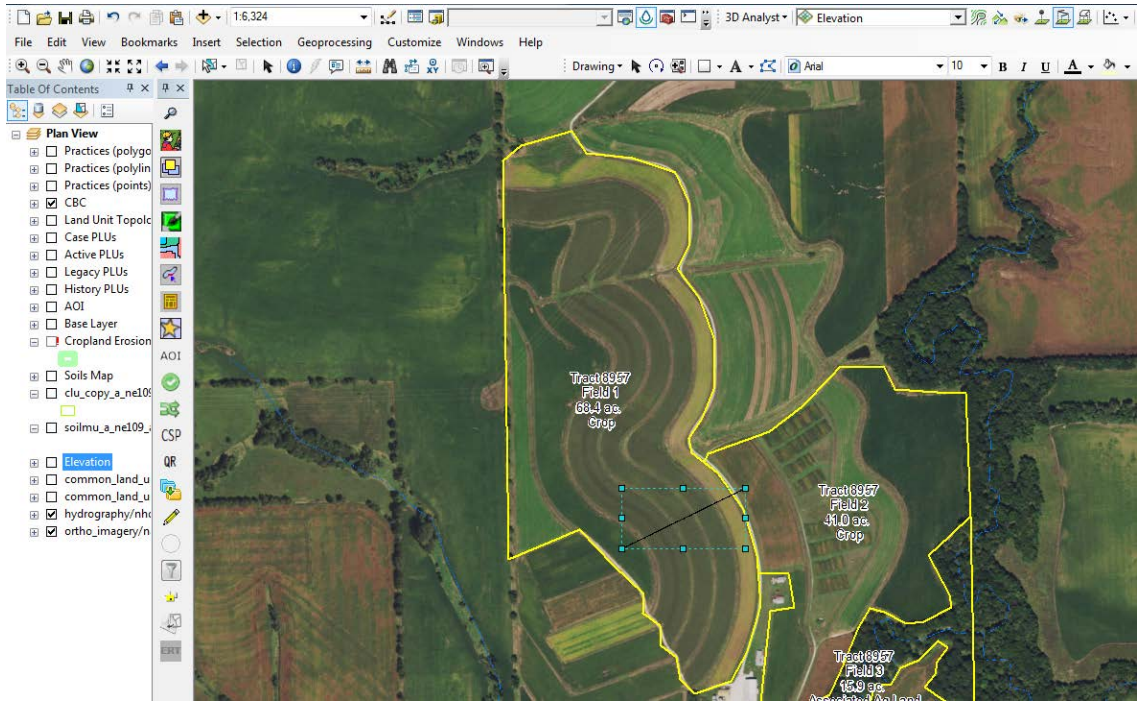

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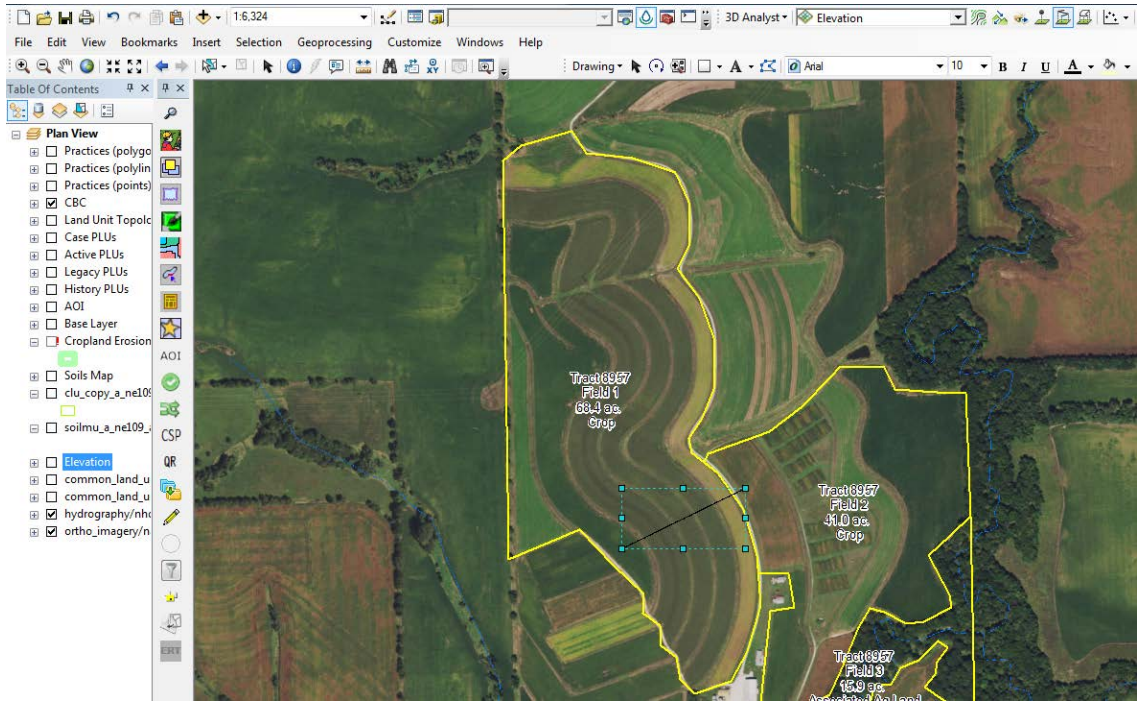
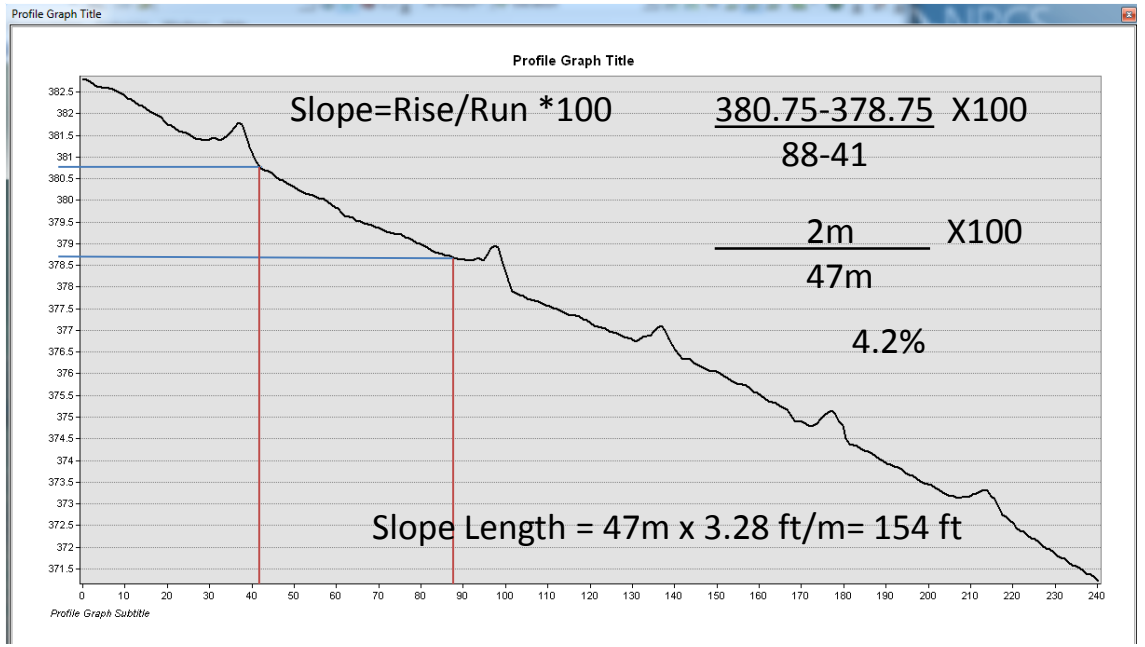
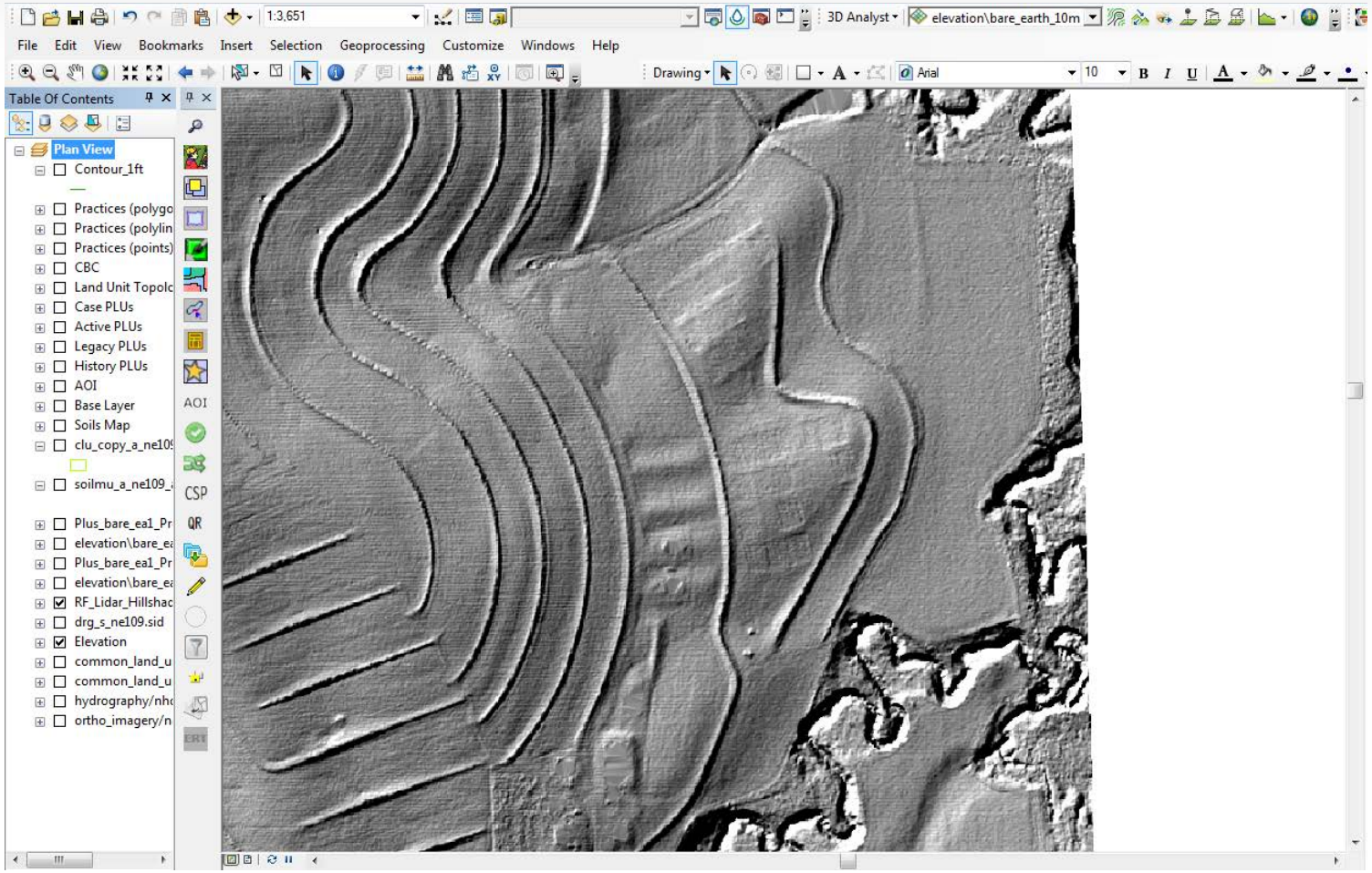
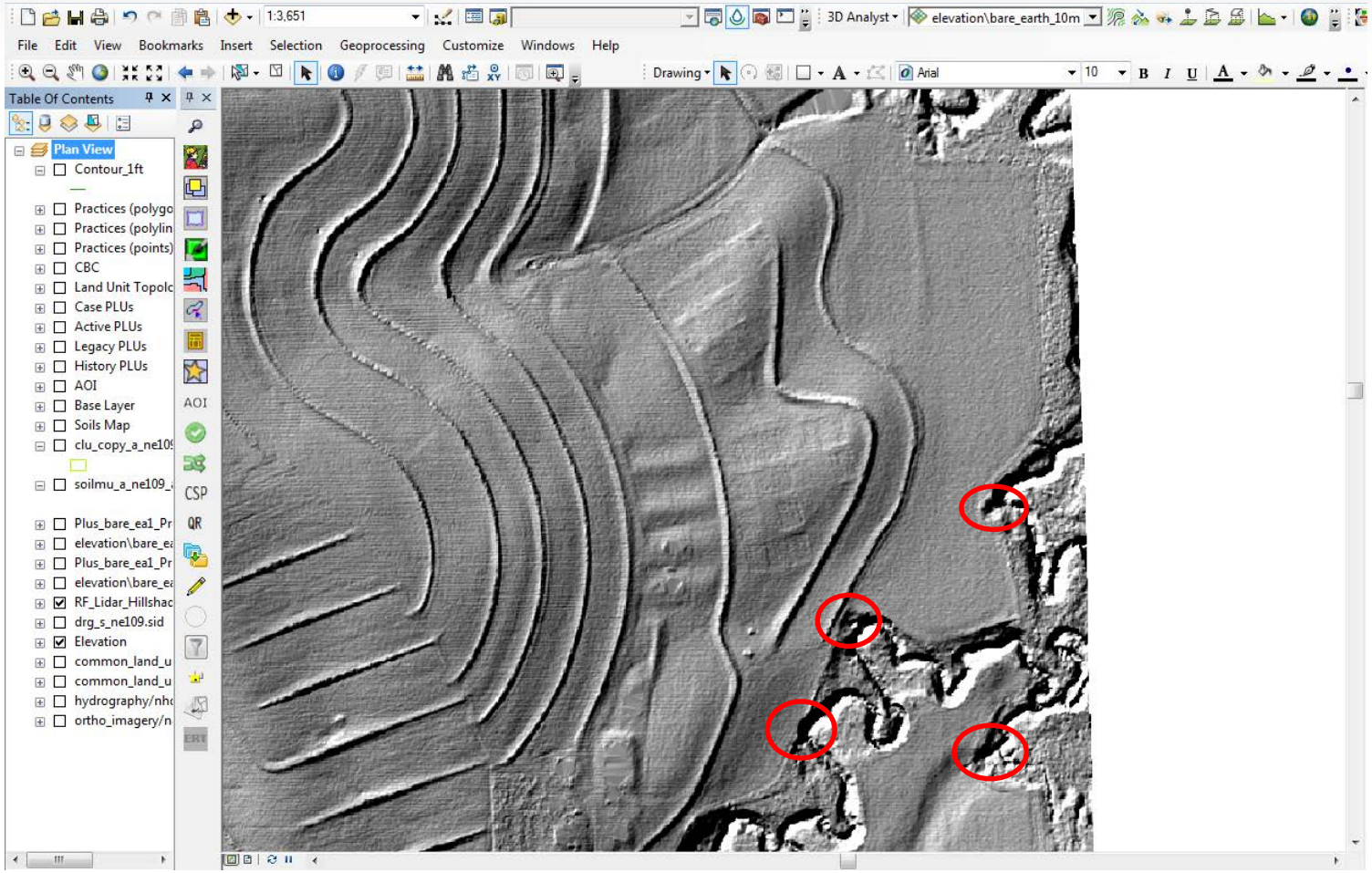




Hillshade Images

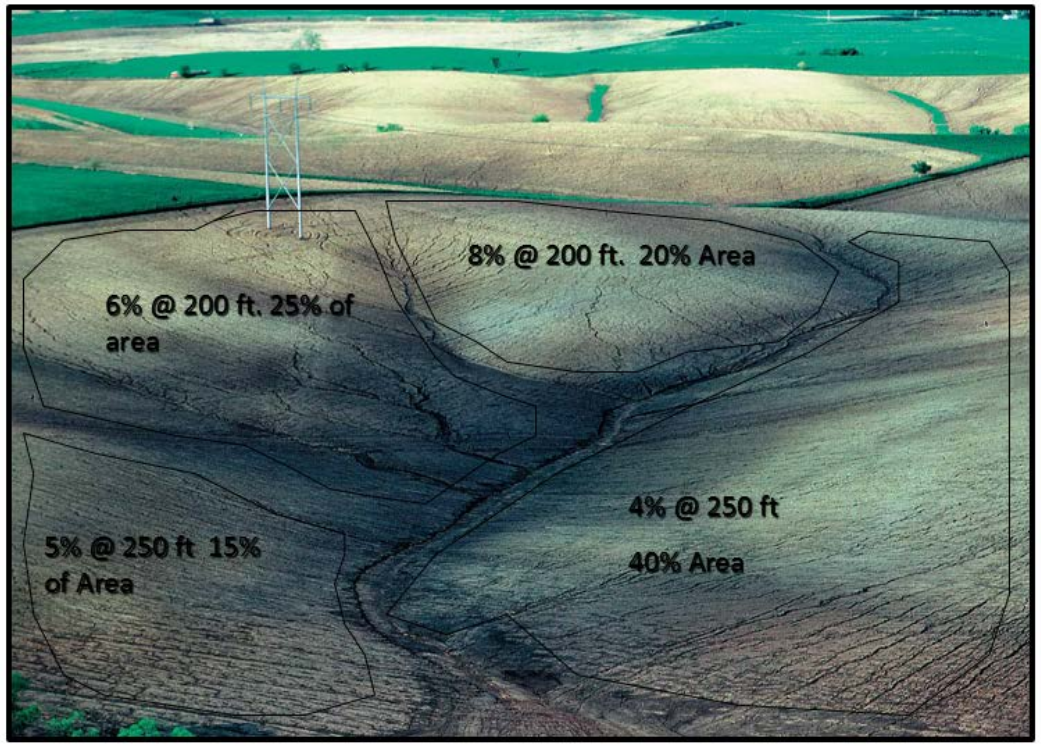


Hillshade Images



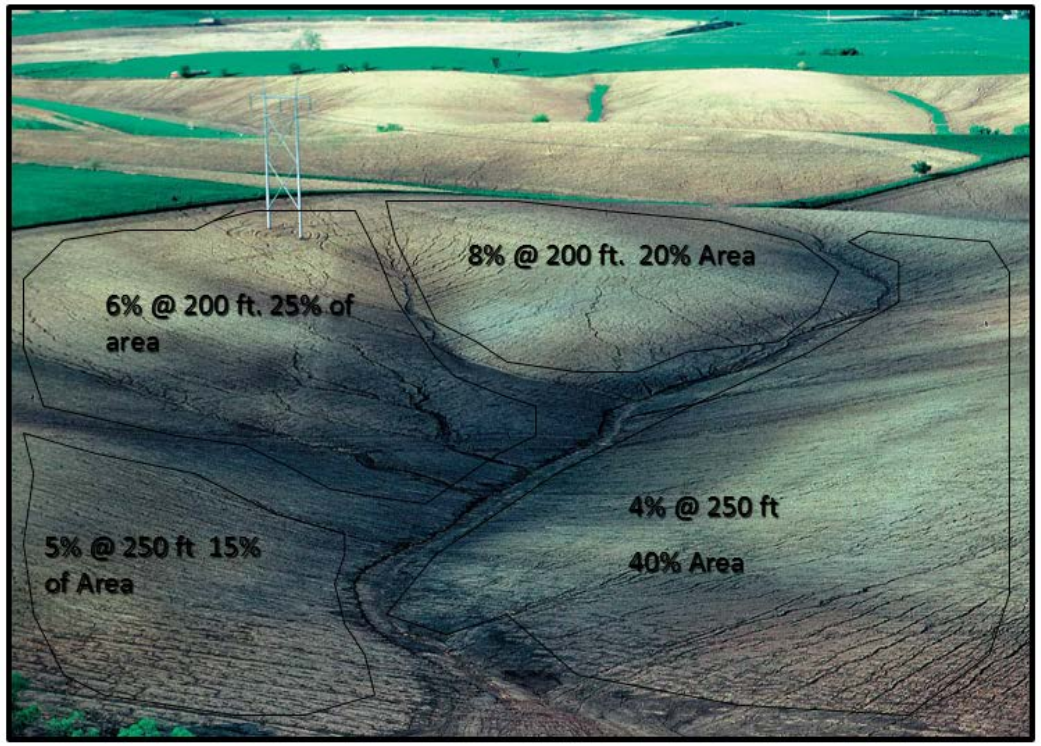
Slope Maps

Significant “Planning Area”



Slope Maps

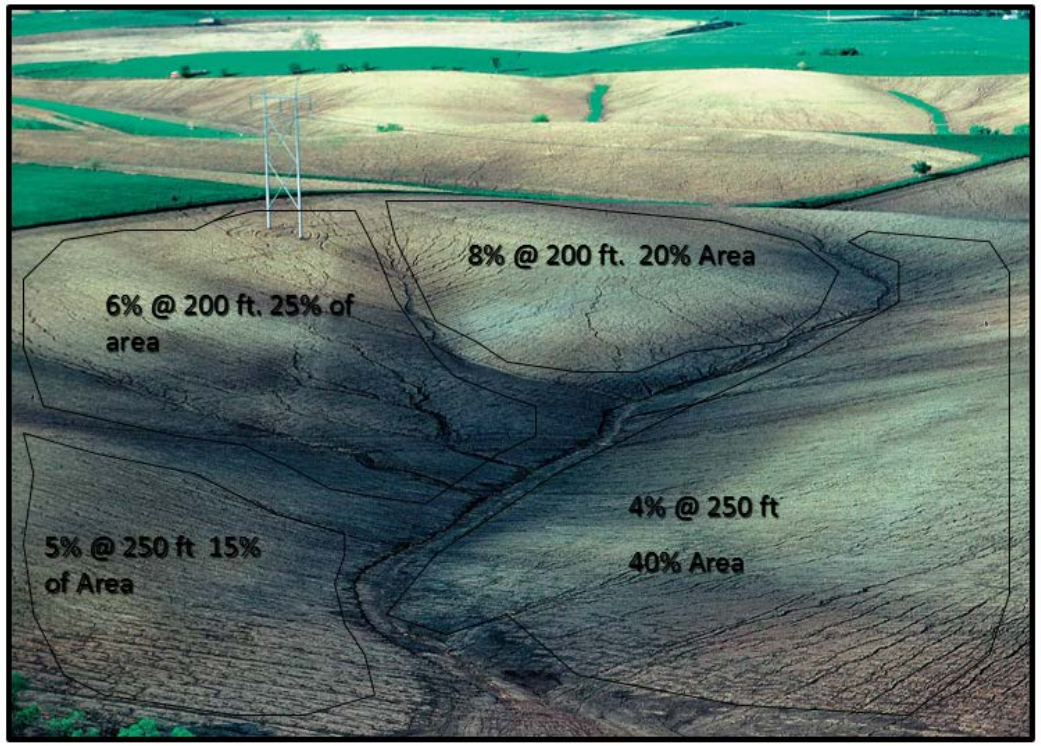
Significant “Planning Area”

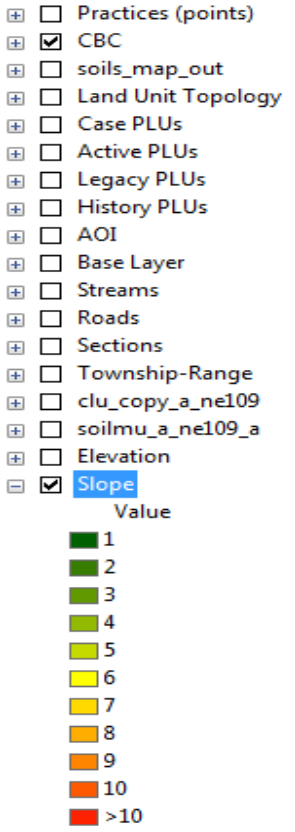


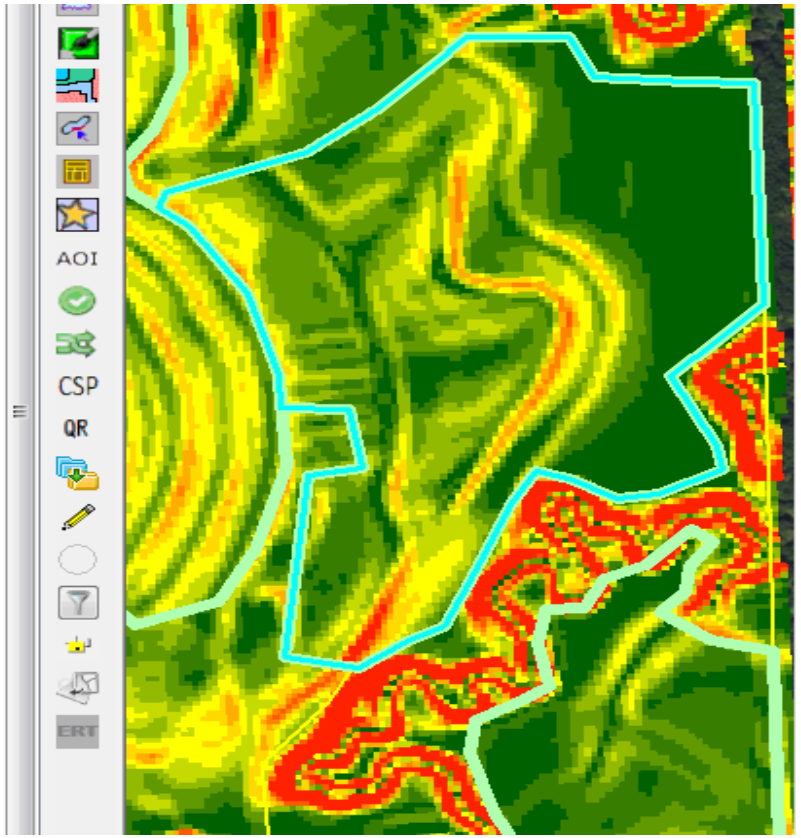
- The area of the field that best represents the field
- A general rule is to find the area (usually 20-30% of the field) that will result in adequate treatment, some areas may be over treated or under treated.
- General rule is to limit the areas of under treatment to less than 20-30% of the field
- The 6% slope area that makes up 25% of the field would probably be the “significant area”. If we adequately treated that slope, we would also be adequately treating the 4% and 5% slope areas (55% of the field). So in this case at least 80% of the field (25% + 55%) is adequately treated. The 8% slope area (20% of the field) may be slightly under treated.

Slope Maps

Significant “Planning Area”

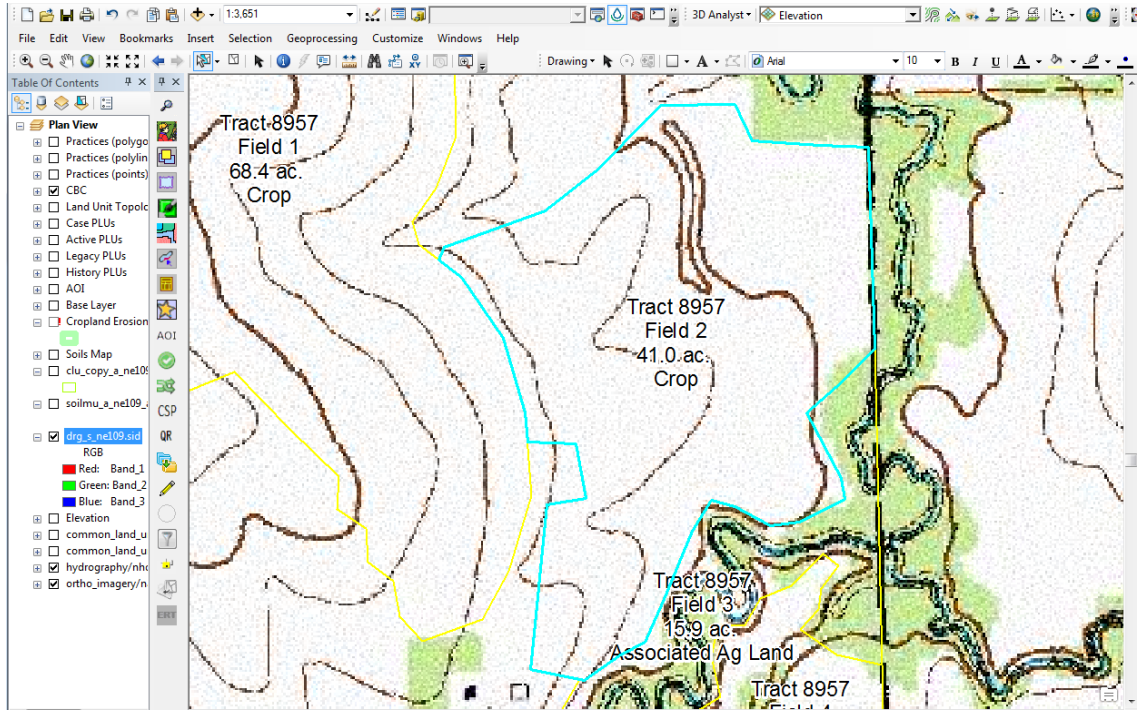






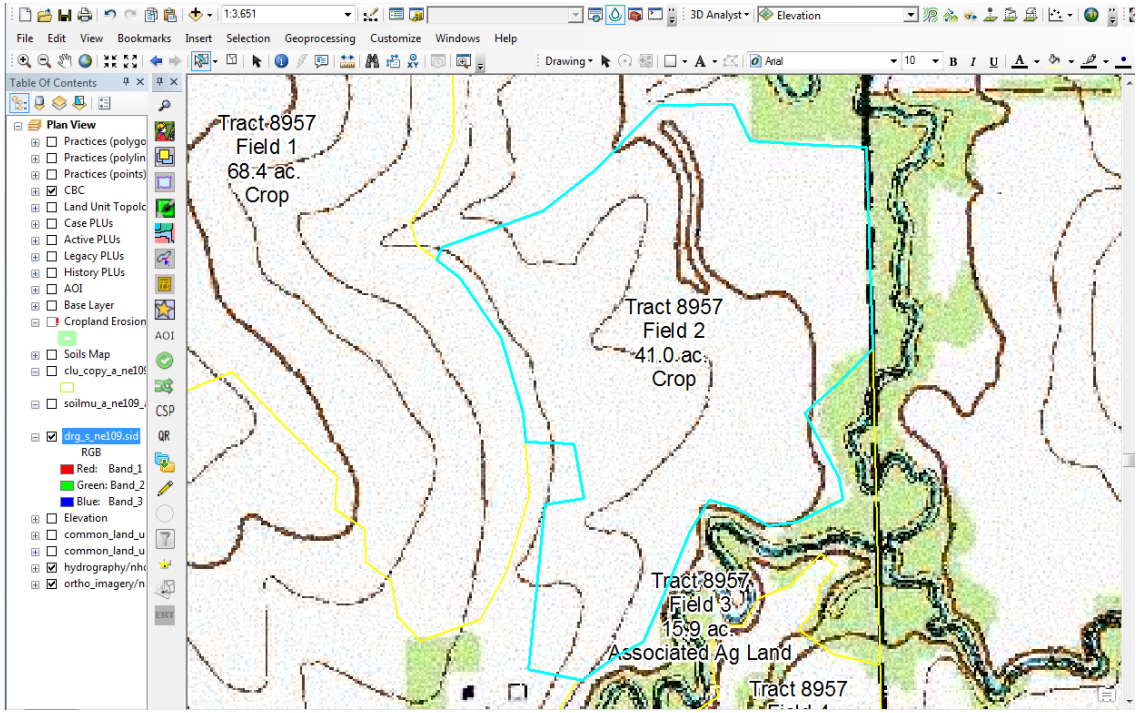
Contour Maps

USGS Topographic DRG

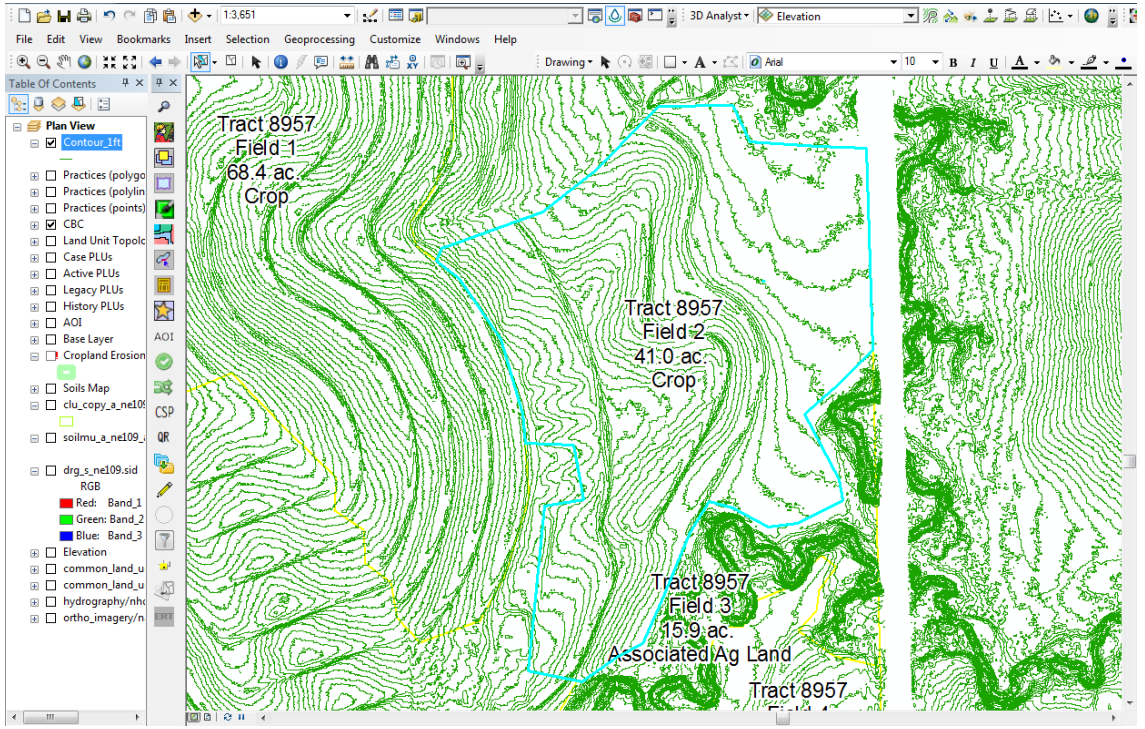


Contour Maps

USGS Topographic DRG

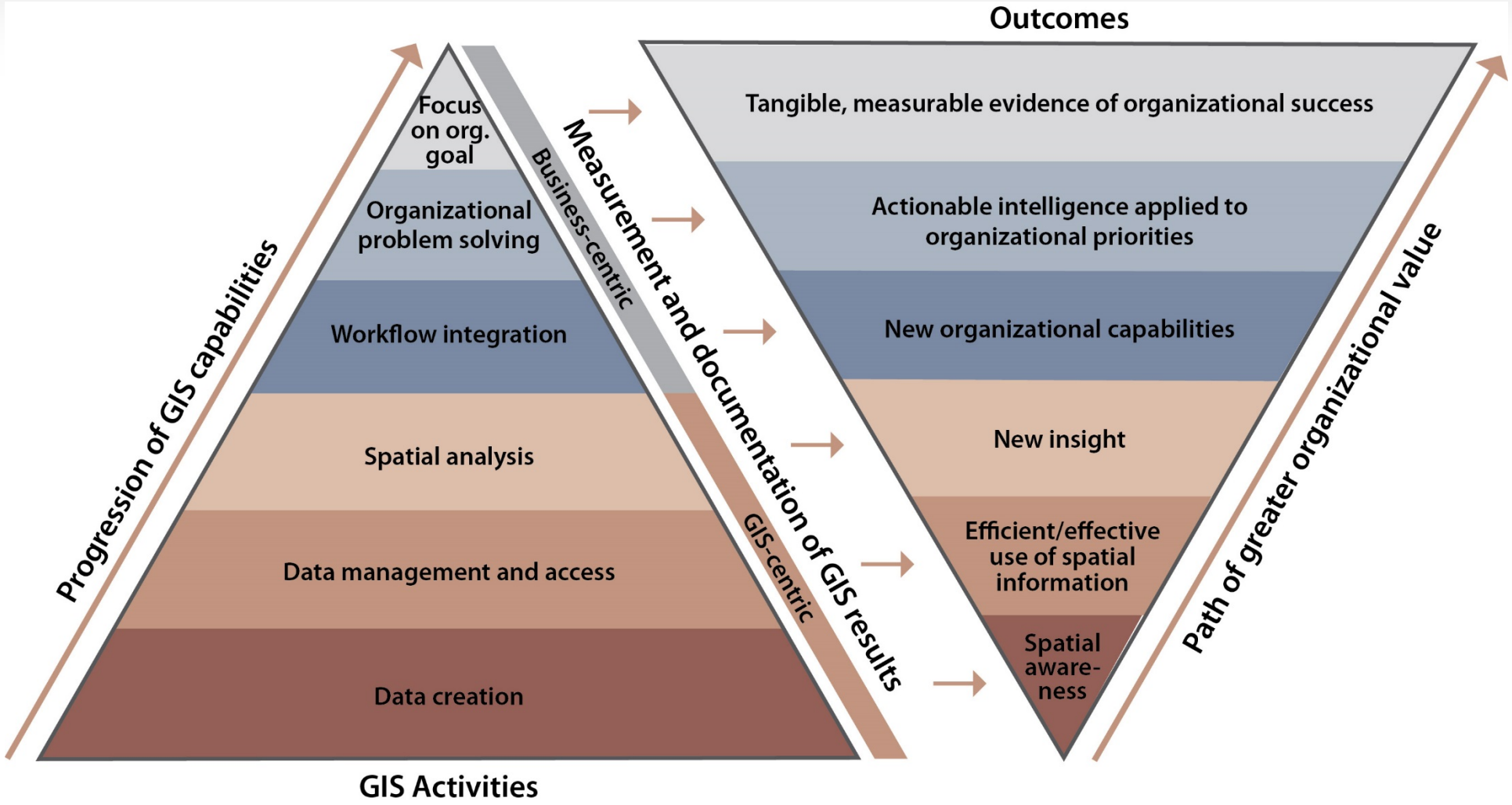


1 foot contours derived from LIDAR



GIS Availability

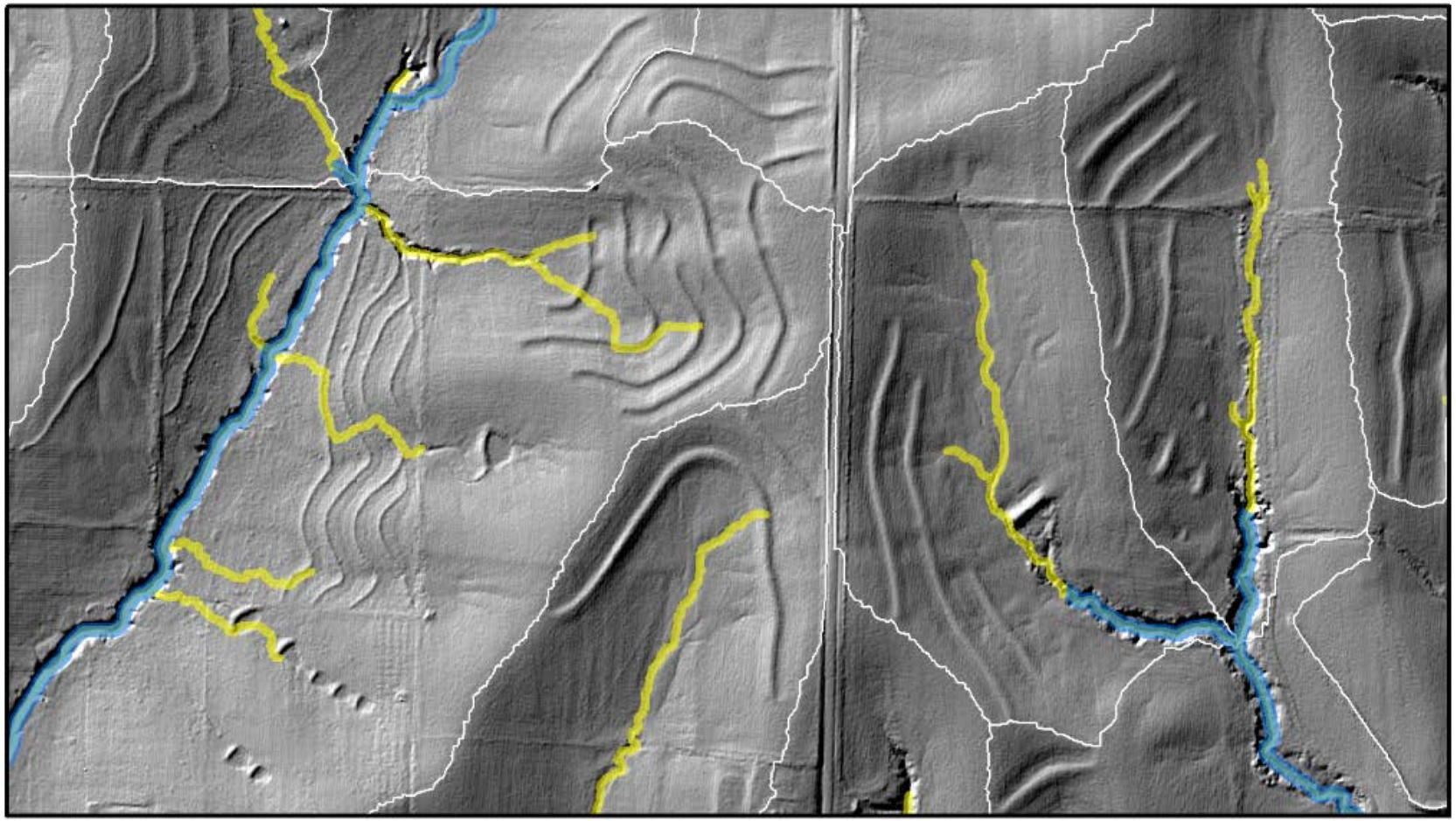
GIS ROI



- Courtesy of Wade Kloos, GIS Director, Utah DNR.

Hydrology

Stream Network and Catchment Areas



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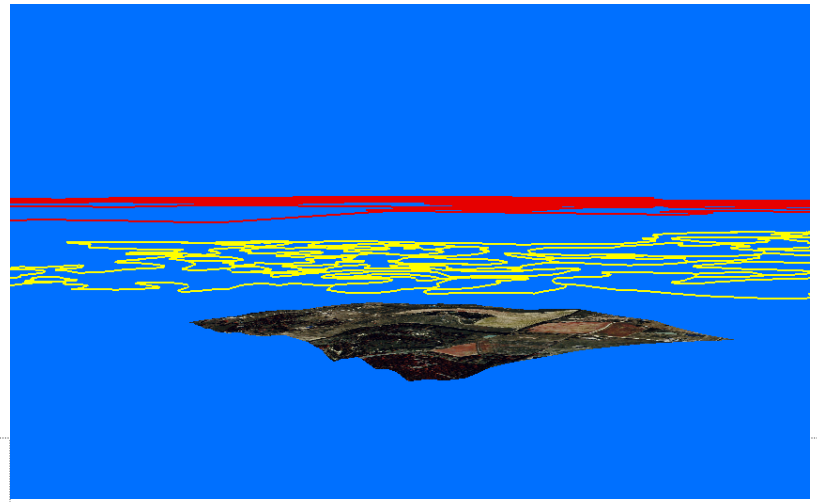
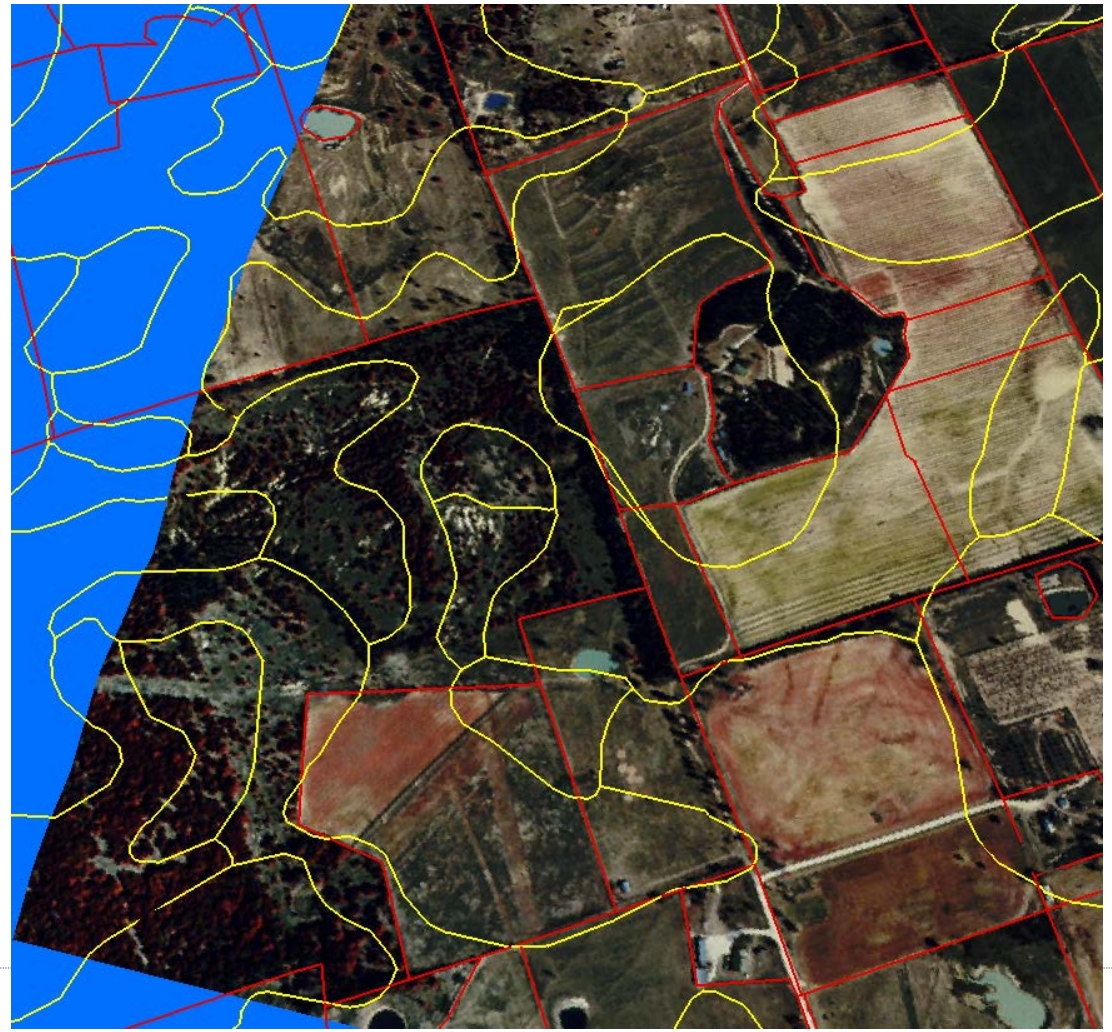
Multiple Dataset Analysis

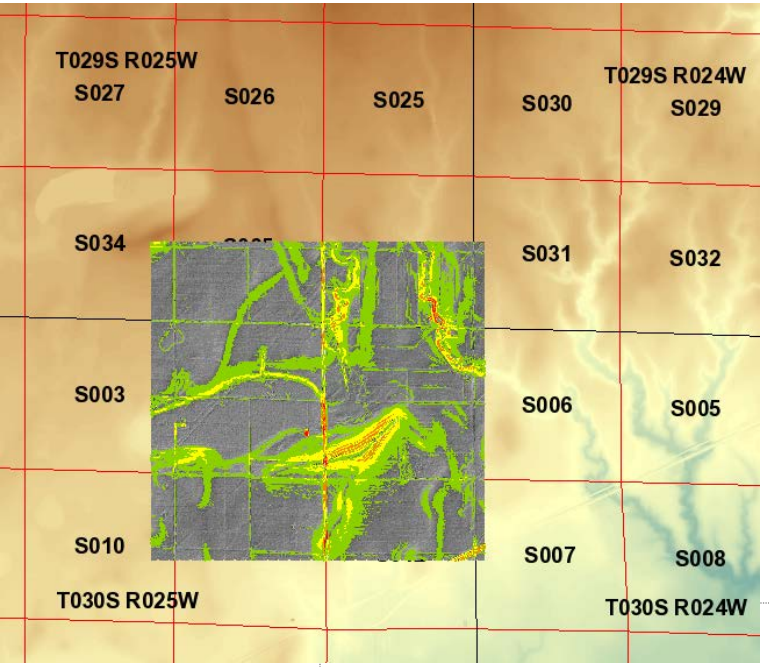
- Spatial Join
- Overlay
- Proximity

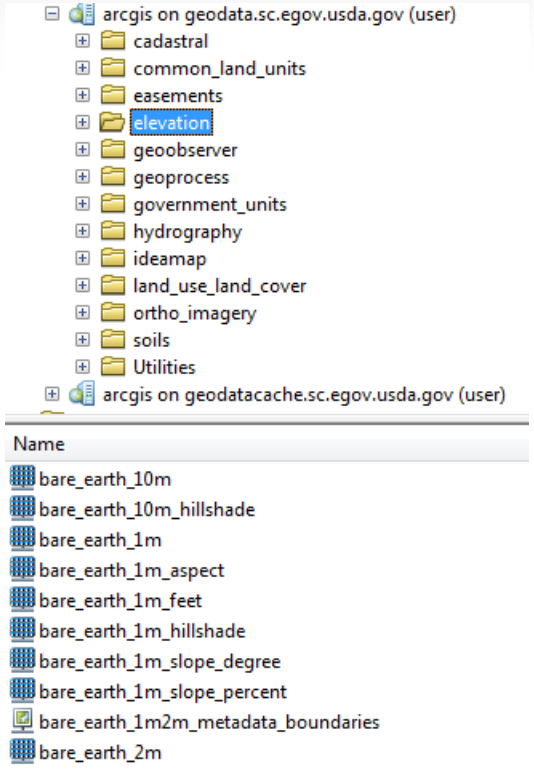


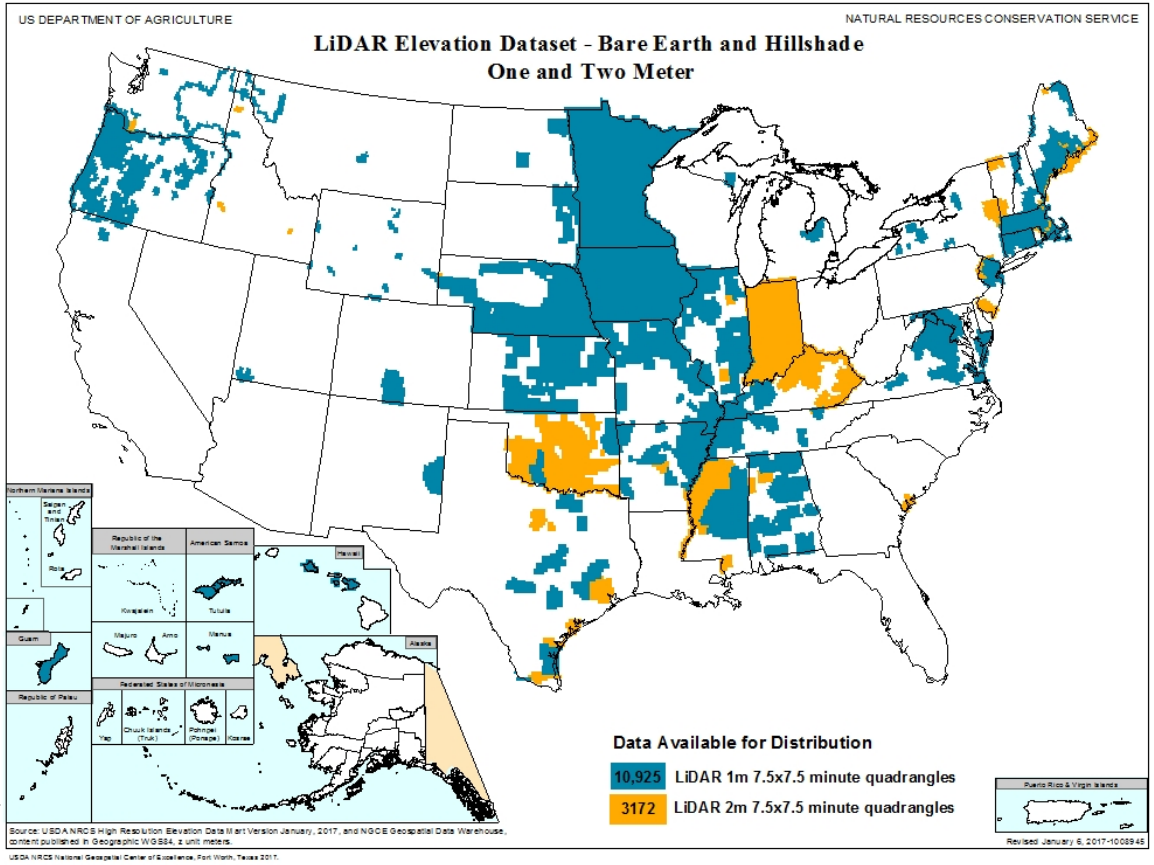


NRCS Web Map Services

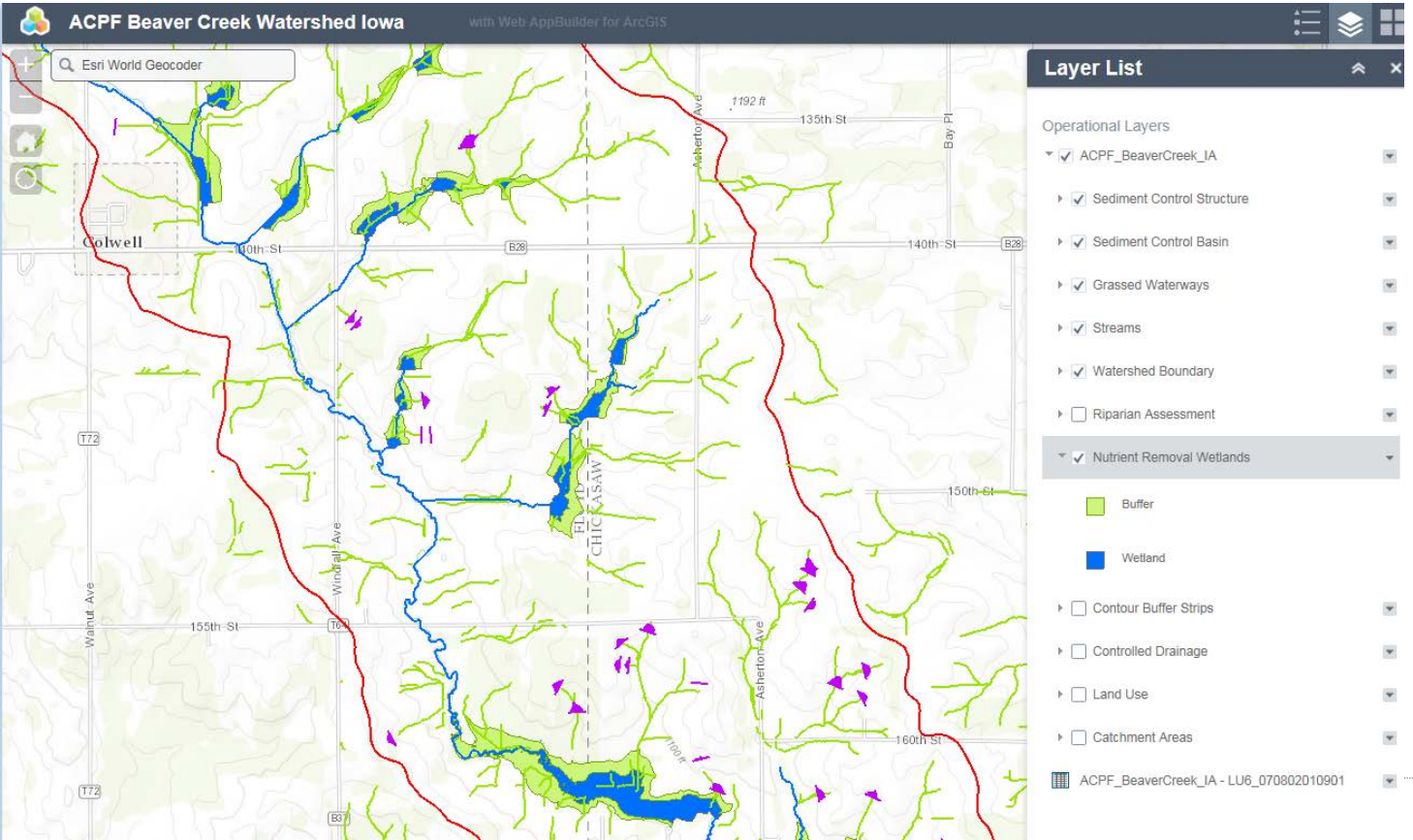
- National Data Availability
- Pre-Built Map Packages



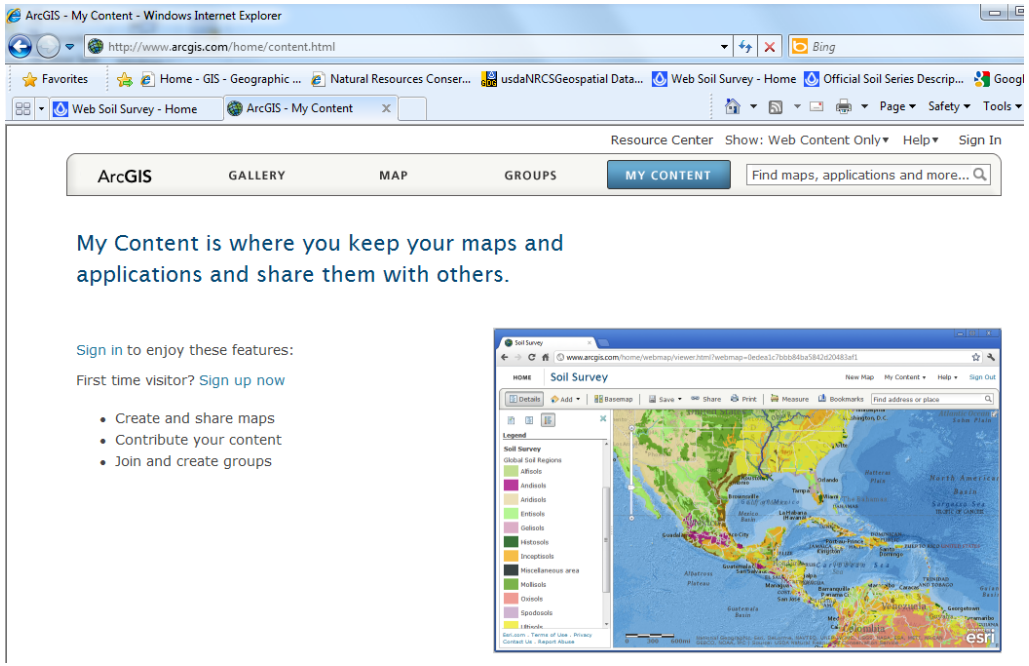




Internet Web Map Applications AGOL/Portal



- Map Services arcgis.com
- Address navigation
- Query, Simple Editing Acre/Distance Measurement, Geoprocessing
- Map Product

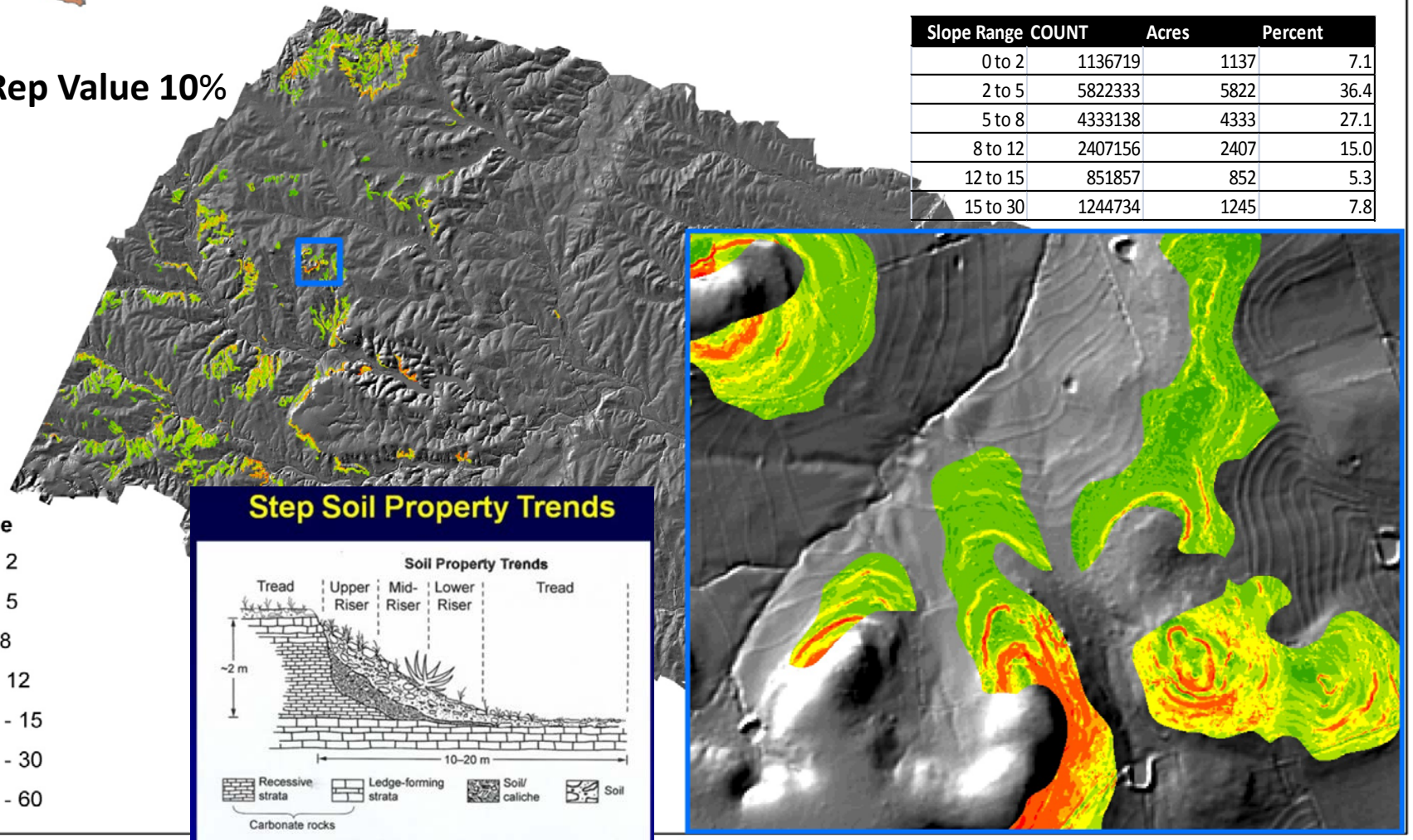


United Natura

NRCS

Williamson County, Texas
LiDAR Data Examples
BkE - Brackett gravelly clay loam, 3 to 16 percent slopes.

Rep Value 10%

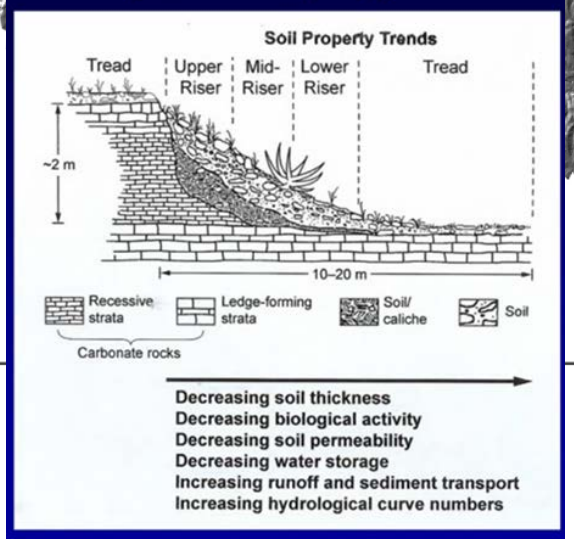


Slope Range	COUNT	Acres	Percent
0 to 2	1136719	1137	7.1
2 to 5	5822333	5822	36.4
5 to 8	4333138	4333	27.1
8 to 12	2407156	2407	15.0
12 to 15	851857	852	5.3
15 to 30	1244734	1245	7.8

BkE Slope

- 0 - 2
- 2 - 5
- 5 -8
- 8 - 12
- 12 - 15
- 15 - 30
- 30 - 60

Step Soil Property Trends



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N

Universal Transverse Mercator
Zone 15
North American Datum 1983

United States Department of Agriculture
Natural Resources Conservation Service, 2010
Prepared by Central National Technology Support Center
501 West Felix Street, Bldg 23
Fort Worth, Texas

Unique Soil and Landform Features on the Edwards Plateau in Central Texas. 2011. L.P. Wilding. Annual Conference Proceedings. SSSA International

What other tools do we need to take to the field?

- Resource Concern Checklists
- Special Environmental Concern Guide Sheets
- Equipment
  - General Tools
  - Soils Tools
  - Cropland Tools
  - Pasture Tools
  - Range Tools
  - Forest Tools
  - Streams
  - Wildlife

General Tools

- Soil Probe
- Sharpshooter
- Compaction Probes
- Wire flags
- Camera
- GPS
- Compass
- Clinometer
- Phone Apps

General Tools

- Soil Probe
- Sharpshooter
- Compaction Probes
- Wire flags
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- Clinometer
- Phone Apps

Soils Tools

- Munsell Soil Color charts
- pH test Kit
- Soil Quality Test Kit
- 6ft tape measure

Cropland Tools

- Clinometer, Hand Level
- Range Pole
- 100 ft tape measure
- Residue Measurement kit
- List of common cropping systems and practices (managements) for the location

Pasture Tools

- Clippers
- Hoops
- Scales and Bags
- Grazing Sticks
- Pasture Condition Scoresheet and instructions
- Pasture Plant ID references
- List of common forage systems for the location

Range Tools

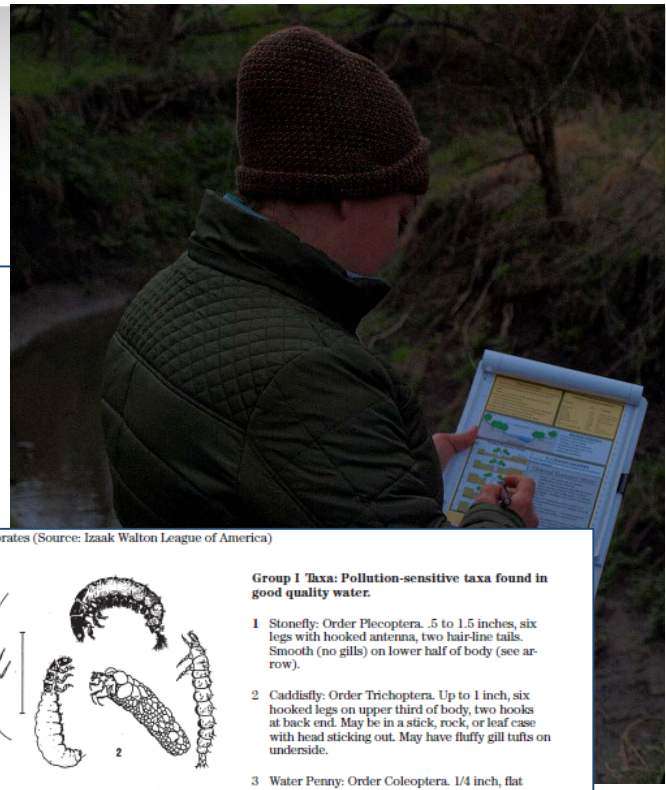
- Clippers
- Hoops
- Scales and Bags
- Range Plant ID references
- Rangeland Health Assessment Guide
- Ecological Site Descriptions
- Ecological Reference Worksheet (Rangeland Health Reference Worksheet)
- List of common plant types for the location

Forest Tools

- Cruz-All, Prism
- DBH or Forester's tape
- 100 ft tape measure
- Clinometer
- Woodland stick
- Increment Borer
- Ecological Site Description
- Woodland Planning Guide
- List of common trees and practices for the location

Stream Tools

- SVAP2
- Rubber Boots
- Dip net
- Sample bottles



United States Department of Agriculture

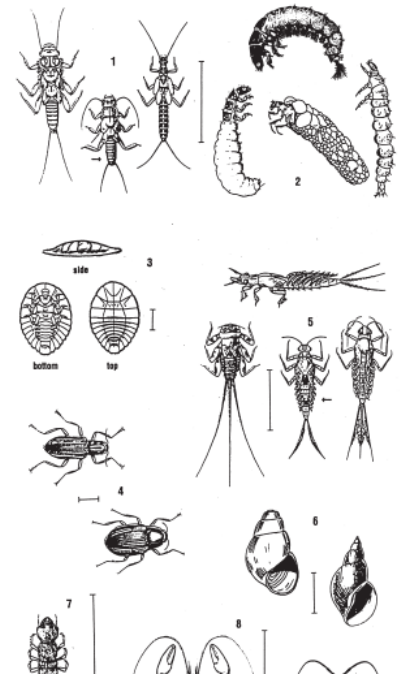
Natural Resources Conservation Service

National Biology Handbook

Subpart B—Conservation Planning

Part 614 **Stream Visual Assessm Protocol Version 2**

Figure 26 Stream invertebrates (Source: Izaak Walton League of America)



Group I Taxa: Pollution-sensitive taxa found in good quality water.

1 Stonefly: Order Plecoptera. .5 to 1.5 inches, six legs with hooked antenna, two hair-line tails. Smooth (no gills) on lower half of body (see arrow).

2 Caddisfly: Order Trichoptera. Up to 1 inch, six hooked legs on upper third of body, two hooks at back end. May be in a stick, rock, or leaf case with head sticking out. May have fluffy gill tufts on underside.

3 Water Penny: Order Coleoptera. 1/4 inch, flat saucer-shaped body with a raised bump on one side and six tiny legs and fluffy gills on the other side. Immature beetle.

4 Riffle Beetle: Order Coleoptera. 1/4 inch, oval body covered with tiny hairs, six legs, antennae. Walks underwater. Swims beneath surface.

5 Mayfly: Order Ephemeroptera. 1/4 to 1 inch, brown, moving, plate-like or feathery gills on sides of lower body (see arrow), six large hooked legs, antennae, two to three long hair-like tails that may be webbed together.

6 Gilled Snail: Class Gastropoda. Shell opening covered by thin plate called operculum. When opening is facing you, shell usually opens on right.

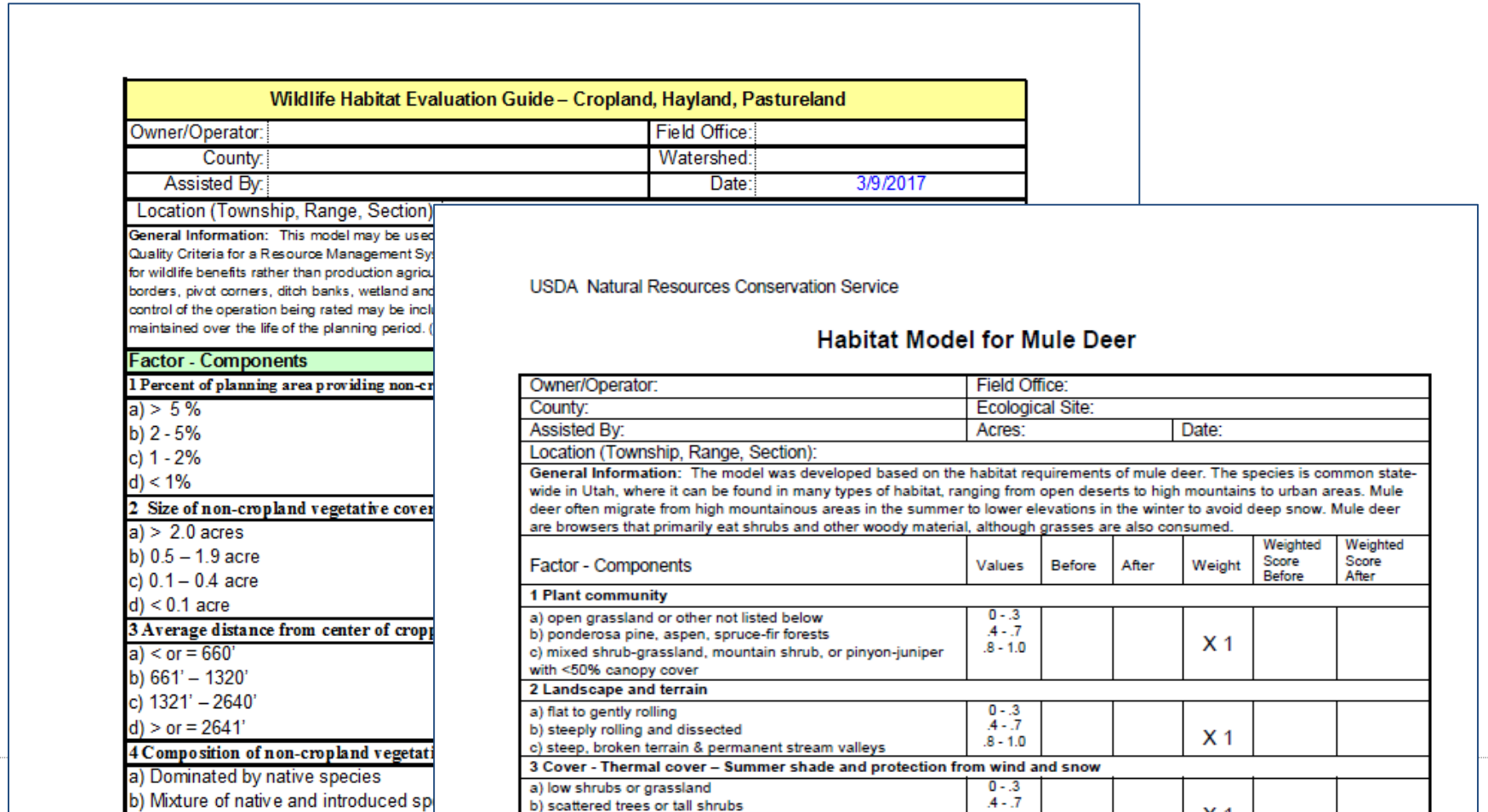
7 Dobsonfly (hellgrammite): Family Corydalidae. 3/4 to 4 inches, dark-colored, six legs, large pinching jaws, eight pair of feelers on lower half of body with paired cotton-like gill tufts along underside, short antennae, two tails, and two pair of hooks at end.

Group II Taxa: Somewhat pollution tolerant taxa found in good or fair quality water.

8 Crayfish: Order Decapoda. Up to 6 inches, 1 large claw, eight legs, resembles lobster.

Wildlife Tools

- WHEG
- Species Guide



Wildlife Habitat Evaluation Guide – Cropland, Hayland, Pastureland

Owner/Operator:		Field Office:	
County:		Watershed:	
Assisted By:		Date:	3/9/2017

Location (Township, Range, Section)

General Information: This model may be used
Quality Criteria for a Resource Management Sy
for wildlife benefits rather than production agricu
borders, pivot corners, ditch banks, wetland and
control of the operation being rated may be incl
maintained over the life of the planning period. (

Factor - Components
1 Percent of planning area providing non-cr
a) > 5 %
b) 2 - 5%
c) 1 - 2%
d) < 1%
2 Size of non-cropland vegetative cover
a) > 2.0 acres
b) 0.5 – 1.9 acre
c) 0.1 – 0.4 acre
d) < 0.1 acre
3 Average distance from center of cropp
a) < or = 660'
b) 661' – 1320'
c) 1321' – 2640'
d) > or = 2641'
4 Composition of non-cropland vegetati
a) Dominated by native species
b) Mixture of native and introduced sp

USDA Natural Resources Conservation Service

Habitat Model for Mule Deer

Owner/Operator:	Field Office:	
County:	Ecological Site:	
Assisted By:	Acres:	Date:
Location (Township, Range, Section):		

General Information: The model was developed based on the habitat requirements of mule deer. The species is common statewide in Utah, where it can be found in many types of habitat, ranging from open deserts to high mountains to urban areas. Mule deer often migrate from high mountainous areas in the summer to lower elevations in the winter to avoid deep snow. Mule deer are browsers that primarily eat shrubs and other woody material, although grasses are also consumed.

Factor - Components	Values	Before	After	Weight	Weighted Score Before	Weighted Score After
1 Plant community						
a) open grassland or other not listed below b) ponderosa pine, aspen, spruce-fir forests c) mixed shrub-grassland, mountain shrub, or pinyon-juniper with <50% canopy cover	0 - .3 .4 - .7 .8 - 1.0			X 1		
2 Landscape and terrain						
a) flat to gently rolling b) steeply rolling and dissected c) steep, broken terrain & permanent stream valleys	0 - .3 .4 - .7 .8 - 1.0			X 1		
3 Cover - Thermal cover – Summer shade and protection from wind and snow						
a) low shrubs or grassland b) scattered trees or tall shrubs	0 - .3 .4 - .7					

Review

Ask yourself:

- What information do you have in the office to identify potential issues?
- What GIS information is available for collecting data prior to meeting with the client?
- What other tools do you need to take to the field for identifying problems and inventorying resources?

Summary

- As workloads increase, we must be efficient in using all information that is available to help streamline conservation planning.
- We have a wealth of information available to us in our offices and online.
- By not using available information, we are not being as efficient as possible.