

July 20, 2007

David Barber
USDA Rural Development
2715 Canterbury Drive
Hays, KS 67601

Re: City of Greensburg, KS
USDA Rural Economic Development Loan

Dear Mr. Barber,

The Kansas Geological Survey (KGS) has received USDA Rural Development's (USDA) June 20, 2007, request for a governmental agency review within the city limits of Greensburg, KS, excluding the 100-yr flood plain. USDA is anticipating financial assistance applications in response to the tornado storm damage which largely destroyed the City of Greensburg. In support of future re-construction efforts, clearance is requested for buildings re-constructed on their original building plot or for buildings re-located and constructed within the city limits. A summary of regional geologic information is included below.

The site is located within the city limits of Greensburg, KS in Kiowa County. Unconsolidated deposits belonging to the Quaternary Kingsdown silt and undifferentiated Quaternary Meade and Tertiary Ogallala formations underlie Greensburg. Generally, these formations consist of silt and sandy silt with some sand and interbedded clay, silt, and sand with some gravel and volcanic ash. Depth to water is approximately 85 to 90 ft below ground surface.

Soils in the Greensburg area are included in the Farnum, Naron, and Ness soil series. The Farnum and Naron series are generally classified as CL-ML, SM-SC, and CL according to the USC System. The Ness series is classified as CH. Most of the Naron and Farnum soils are rated as "not limited" or "somewhat limited," respectively, with regard to construction of small commercial buildings and dwellings with- or without basements, according the Kiowa County USDA soil survey report. Limitations associated with Farnum series can generally be minimized by special planning, design, or installation. The Ness series is considered "very limited" and would generally require special design or installation features for structures built on this soil. Poor performance and high maintenance can be expected due to ponding, shrink-swell, and low strength of this soil. Within the developed areas of Greensburg, the Ness series appears to be limited to a small area south of US 400 between Cherry and Spruce St. The Ness

Mr. David Barber
July 20, 2007
Re: City of Greensburg, KS
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series also occurs at limited areas on the western edge of the city either outside the city limits or in undeveloped areas.

Outside of the Ness soil series, residential and small business construction should not encounter any unduly adverse geologic conditions that would significantly impact reconstruction efforts provided common industry care and practice standards are followed.

A review of the Survey's water well data base indicates that numerous environmental sites do exist within the city limits. If buildings are re-located onto these sites, they could affect either construction activities or owner-environmental liability issues and therefore may need to be addressed by KDHE.

Overall there are no unduly adverse geologic conditions that should affect this project. A completed request for comments form is enclosed.

This letter is an assessment based on the regional geologic conditions available at the KGS at the time of writing and cannot be used in substitute of a detailed site characterization. Other geologic conditions, not discussed herein, or for which the KGS has no knowledge, may affect the viability or safe operation of this facility or property. It is the responsibility of the applicant to provide any necessary characterization, geotechnical or environmental testing, or design by a licensed professional geologist or engineer to complete the project.

Sincerely,

A handwritten signature in black ink, appearing to read "Sh Lyle".

Shane Lyle, RG
Geology Extension Coordinator

Enclosure

cc: Dan Suchy, KGS Data Resources Library

AGENCY REVIEW TRANSMITTAL FORM

Comments by: Kansas Geological Survey
Dr. William Harrison
1930 Constant Ave
Lawrence KS 66047

Transmittal Date: June 20, 2007

PROJECT TITLE: City of Greensburg

CONTACT PERSON: David E. Barber

☐ Notification of Intent
☒ Preapplication
☐ Final Application
☐ Direct Development

This form provides notification and the opportunity for your agency to review and comment on this proposed project required by executive Order 12372. Please complete Parts II & III as appropriate. Your prompt response will be appreciated.

RETURN TO:
USDA, RURAL DEVELOPMENT
2715 CANTERBURY DRIVE
HAYS, KS 67601

PART I

REVIEW AGENCIES/COMMISSIONS

☐ Aging	☐ Education	☐ State Forester
☐ Agriculture -DWR	☒ Geological Survey, KS	☐ Transportation
☐ Biological Survey, KS	☐ Health & Environment	☐ Water Office, Kansas
☐ Conservation Commission	☐ Historical Society	☐ Wildlife & Parks
☐ Corporation Commission	☐ Human Resources	
☐ Commerce	☐ Social & Rehab Services	

PART II

(To be completed by review agency and returned to contact person)

AGENCY REVIEW COMMENTS

COMMENTS:

see cover letter

PART III

(To be completed by review agency and returned to contact person)

RECOMMENDED ACTION COMMENTS

☐ Clearance of the project should be granted.	☒ Clearance of the project should not be delayed but the applicant should be (in the final application) address and clarify the questions or concerns indicated above.
☐ Clearance of the project should not be granted.	
☐ Clearance of the project should be delayed until the issues or questions have been clarified.	☐ Request the opportunity to review final application prior to submission to the federal funding agency.
☐ Request a State Process Recommendation in concurrence with above comments.	

Reviewer's Name:

[Signature]

DIVISION/AGENCY/COMMISSION

Date:

7/19/07

PLEASE FAX THIS FORM TO (785) 625-6065 As Soon As Possible. THANK YOU



**United States Department of Agriculture
Rural Development**

June 20, 2007

Kansas Geological Survey
Dr. William Harrison
1930 Constant Ave
Lawrence KS 66047

Subject: City of Greensburg

We are anticipating receiving applications in this disaster affected area to Rural Development for financial assistance to assist in the reconstruction of several potential community and/or water & waste water projects. We are forwarding this information in general for your review in order to be proactive and expedite the processing in order to offer this community assistance as they begin their rebuilding process. We are trying to clear the environmental process in order to assist the community in this emergency situation. Clearance is specifically requested inside the City limits and outside the 100 year flood plain. We are not anticipating any applications for buildings older than 50 years old. The clearance we are requesting is for new construction of buildings on the same location they were previously located, or if they are relocating to a new location it will be within the city limits and outside of the 100 year flood plain. Maps including the city limits are included. For more information please contact:

**David Barber
USDA Rural Development
2715 Canterbury Drive
Hays, KS 67601
785-628-3081**

If you have any Environmental or Intergovernmental Review issues concerning the proposed project, please provide written comments to this office within 30 days of the date of this letter. An "Agency Review Transmittal Form" is enclosed for your response.

Rural Development will not obligate funds for this project until after the 30 days have expired and until we have completed an Environmental Assessment of the project.

Sincerely,

DAVID E. BARBER
Area Specialist

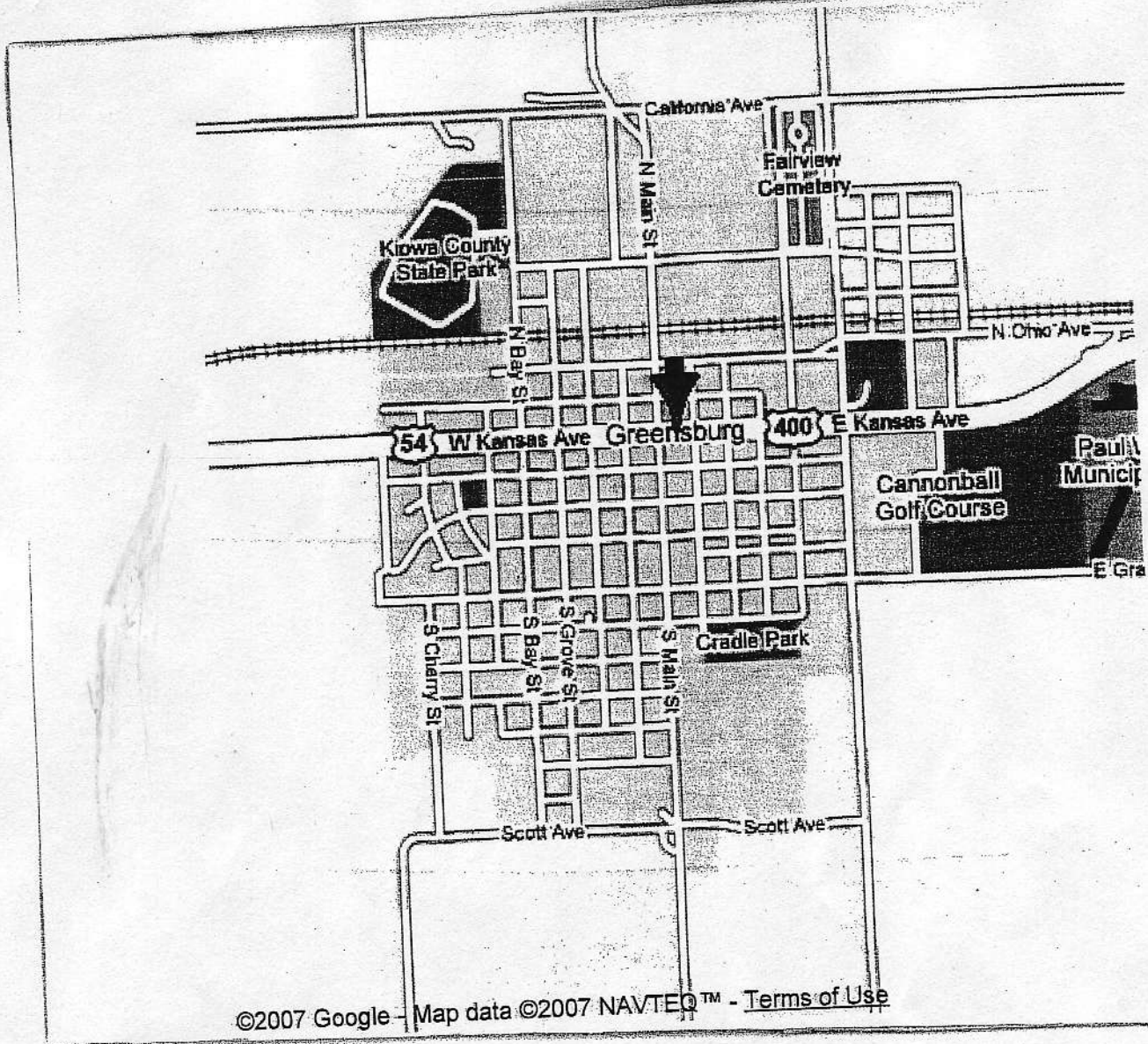
Enclosures

DEBarber:lz

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Committed to the future of rural communities

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☒ Medium
☐ Large

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1 : 50,000

Coordinate Format

UTM

Map Datum

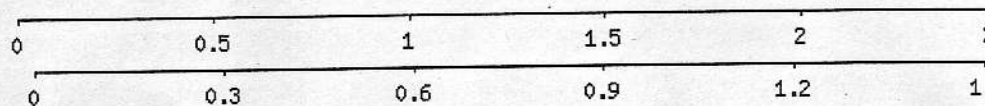
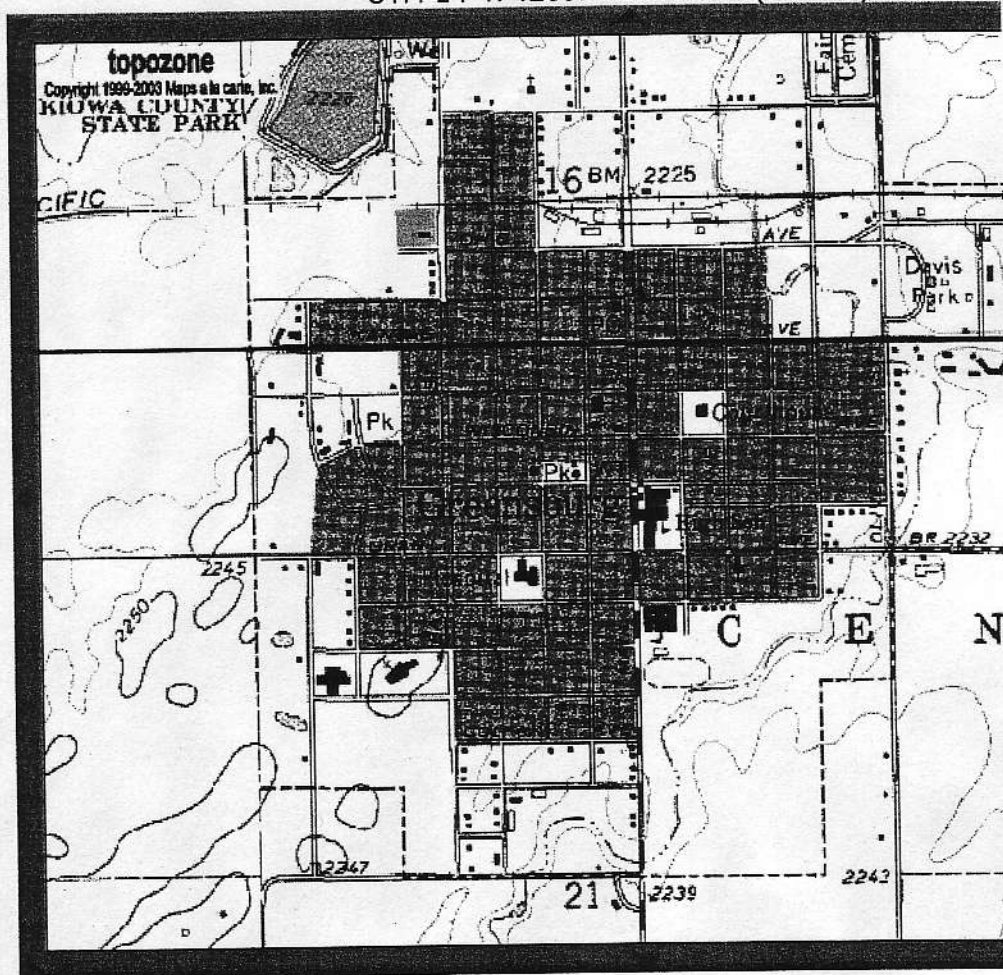
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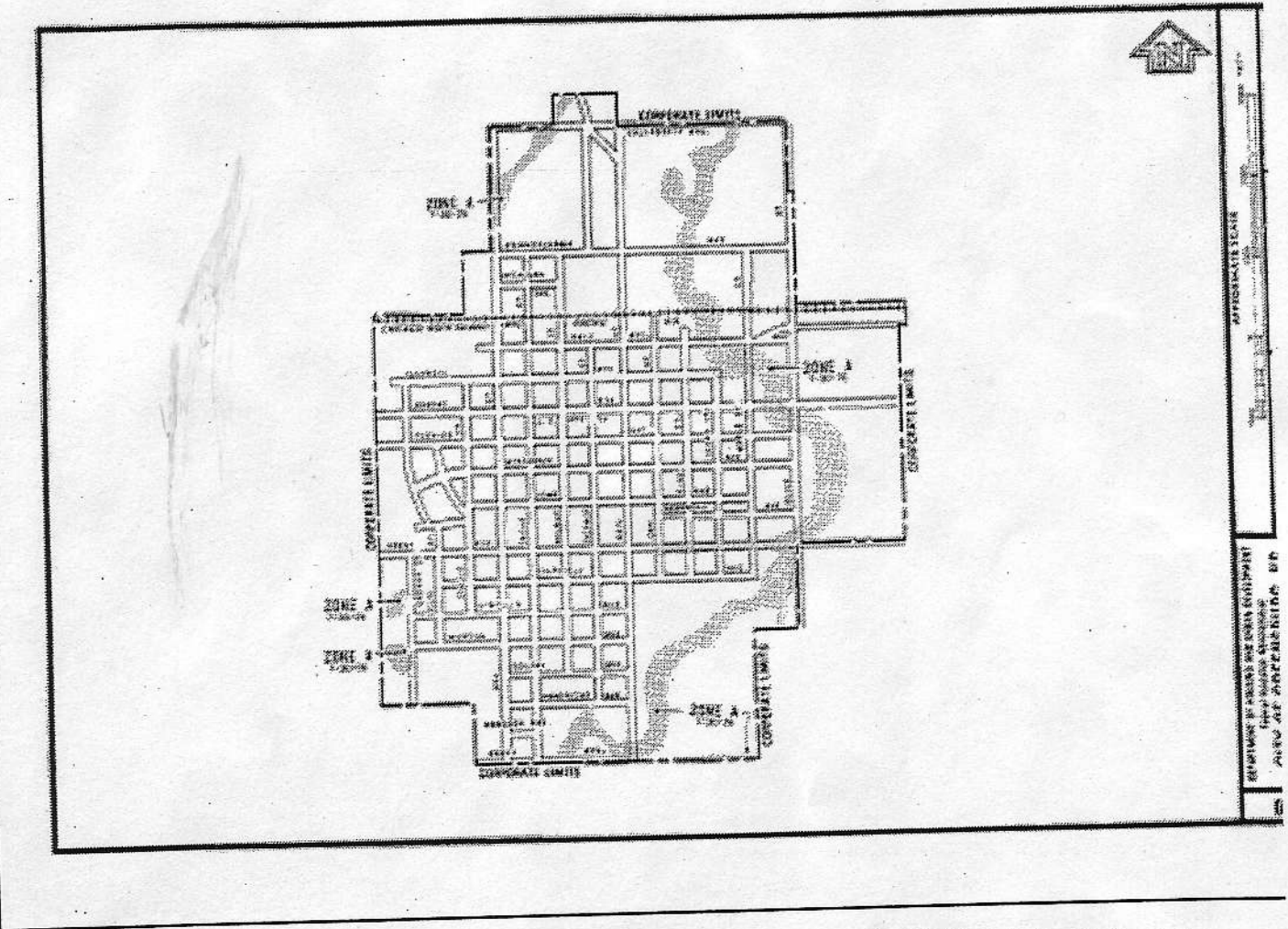
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MSC Viewer





Farmland Classification

Farmland Classification— Summary by Map Unit — Kiowa County, Kansas				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
2612	Harney silt loam, 0 to 1 percent slopes	All areas are prime farmland	18.9	2.4%
2715	Ness silty clay	Not prime farmland	7.0	0.9%
5892	Farnum loam, 0 to 1 percent slopes	All areas are prime farmland	485.1	60.6%
5893	Farnum loam, 1 to 3 percent slopes	All areas are prime farmland	163.7	20.5%
5909	Naron fine sandy loam, 0 to 1 percent slopes	All areas are prime farmland	17.7	2.2%
5910	Naron fine sandy loam, 1 to 3 percent slopes	All areas are prime farmland	107.9	13.5%
Totals for Area of Interest (AOI)			800.2	100.0%

Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

References:

- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries. Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service.
- U.S. Department of Agriculture Handbook 18.
- Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

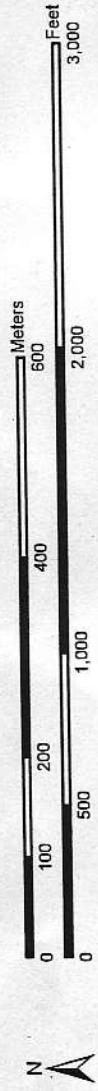
Report—Hydric Soils

Hydric Soils—Kiowa County, Kansas				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
2612—Harney silt loam, 0 to 1 percent slopes				
	Ness	—	Depressions	2B3
	Aquolls	—	Depressions	2B3
2715—Ness silty clay				
→ Outside city limits	Ness	100	Playas	2B3, 3
5892—Farnum loam, 0 to 1 percent slopes				
	Carwile	—	Depressions on paleoterraces	2A, 3
	Aquolls	—	Depressions, drainageways, hillslopes	2B3
5893—Farnum loam, 1 to 3 percent slopes				
	Aquolls	—	Depressions, drainageways, hillslopes	2B3
5909—Naron fine sandy loam, 0 to 1 percent slopes				
	Carwile	—	Depressions on paleoterraces	2A, 3
	Aquolls	—	Depressions, drainageways, hillslopes	2B3

Hydric Soils—Kiowa County, Kansas				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
5910—Naron fine sandy loam, 1 to 3 percent slopes				
	Carwile	—	Depressions on paleoterraces	2A, 3
	Aquolls	—	Depressions, drainageways, hillslopes	2B3

Data Source Information

Soil Survey Area: Kiowa County, Kansas
Survey Area Data: Version 5, Dec 14, 2006



References:

- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service.
- U.S. Department of Agriculture Handbook 18.
- Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

Report—Hydric Soils

Hydric Soils—Kiowa County, Kansas				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
2715—Ness silty clay				
<i>not side of any construction</i> 5892—Farnum loam, 0 to 1 percent slopes	Ness	100	Playas	2B3, 3
	Carwile	—	Depressions on paleoterraces	2A, 3
	Aquolls	—	Depressions, drainageways, hillslopes	2B3
5909—Naron fine sandy loam, 0 to 1 percent slopes				
	Carwile	—	Depressions on paleoterraces	2A, 3
	Aquolls	—	Depressions, drainageways, hillslopes	2B3
5910—Naron fine sandy loam, 1 to 3 percent slopes				
	Carwile	—	Depressions on paleoterraces	2A, 3
	Aquolls	—	Depressions, drainageways, hillslopes	2B3

Map Unit Legend

Kiowa County, Kansas (KS097)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2715	Ness silty clay	9.3	3.3%
5892	Farnum loam, 0 to 1 percent slopes	50.7	18.0%
5909	Naron fine sandy loam, 0 to 1 percent slopes	29.4	10.5%
5910	Naron fine sandy loam, 1 to 3 percent slopes	191.8	68.2%
Totals for Area of Interest (AOI)		281.3	100.0%

In some areas, land that does not meet the criteria for prime or unique farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

In some areas that are not identified as having national or statewide importance, land is considered to be *farmland of local importance* for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

Report—Prime and other Important Farmlands

Prime and other Important Farmlands— Kiowa County, Kansas		
Map Symbol	Map Unit Name	Farmland Classification
2715	Ness silty clay	Not prime farmland
5892	Farnum loam, 0 to 1 percent slopes	All areas are prime farmland
5909	Naron fine sandy loam, 0 to 1 percent slopes	All areas are prime farmland
5910	Naron fine sandy loam, 1 to 3 percent slopes	All areas are prime farmland

Data Source Information

Soil Survey Area: Kiowa County, Kansas
Survey Area Data: Version 5, Dec 14, 2006