

KANSAS GEOLOGICAL SURVEY

1930 Constant Ave., Campus West
The University of Kansas
Lawrence, Kansas 66047-3726
Phone: 785-864-3965
Fax: 785-864-5317

Mr. David Vagts
EBH & Associates
1105 Williams
Great Bend, KS 67530

December 4, 2006

Dear Mr. Vagts,

I received a notice to review your project for construction of new wastewater treatment lagoons for the city of Alma. The soil information from the NRCS for Wabaunsee County is limited in descriptions. The soils are generally silty clay loams with minimal clay. The descriptions available for the soils from other counties are similar and do not indicate any features such as macropores or fractures that would permit rapid flow if leakage would occur.

Depth to water ranges from 20 to 85 feet deep in surrounding townships (based on available water well records). Based on the topographic map it appears that the proposed site is currently located on the river alluvium. Testing should be done to determine the depth to groundwater at the site in order to decide if a liner should be used.

Overall the project looks acceptable and I have no objections to the project moving forward. The above discussion represents the information that the Kansas Geological Survey has on this proposed site. Other geologic conditions, not discussed here, might affect the stability or safe operation of the proposal. The information provided in this letter is from regional (countywide and statewide) studies and should not be used as a substitute for detailed site investigations by a licensed geologist or engineer. It is the responsibility of the applicant to produce the detailed site evaluation.

Sincerely,

Margaret A. Townsend
Hydrogeologist

EBH & Associates

Evans - Bierly - Hutchison & Associates, P.A.

1105 Williams

Great Bend, Kansas 67530-4487

(620) 793-8411

FAX (620) 793-8413

ENGINEERS

SURVEYORS

October 31, 2006

Dr. William Harrison, Director
Kansas Geological Survey *margaret Townsend*
KU-1930 Constant Ave-Campus West
Lawrence, Kansas 66047

RE: Intergovernmental Review for Environmental Clearance/Comment
Kansas Water Pollution Control Revolving Fund (KWPCRLF) Program
Wastewater Treatment Facilities (WWTF) Improvements
City of Alma, Kansas

Mr. Harrison:

The City of Alma, Wabaunsee County, Kansas is applying for a loan through the KWPCRLF program administered by the Kansas Department of Health & Environment (KDHE) for the financing of major WWTF Improvements project and with a grant from the Community Development Block Grant program. As a part of the process, KDHE must prepare an environmental clearance document to the project based on clearances/comments received from an intergovernmental review.

The purpose of this letter is to request such a review from your agency. Enclosed are data and information regarding the project, hopefully sufficient for your needs. However, if further information or assistance is needed, please contact me at (620) 793-8411.

David A Vagts
EBH & Associates
1105 Williams
Great Bend, Kansas 67530

Please return clearances/comments to me at the address above by December 31, 2006 for forwarding to KDHE as a part of the City's loan application. Thanks for your help and cooperation with these matters.

Sincerely,
EBH & Associates

David A. Vagts

David A Vagts

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Project Description Form

Project Location: The existing Alma Wastewater Treatment Plant, Kansas Permit No.: M-KS01-0001 is located south of the City of Alma, Wabaunsee County, Kansas. It's legal description is S 1/2, NE 1/4, Section 15, Township 12S, Range 10E. The project area includes, the existing WWTF site and approximately 20 acres more or less NW 1/4, NE 1/4, SE 1/4 located in the same Section 15. The project delineation and locations are shown on Figure 1.

Project Type: Construction of WWTF upgrades including:

- New sanitary sewer outfall line

- New headworks

- Upgrade to pretreatment aeration basin

- Repiping the existing lagoons

- Construction of a new 3-acre treatment cell - *also include 3 acres of land for the new cell*

Project Need:

The project is necessary for the City of Alma to upgrade their wastewater treatment capabilities to meet new discharge permit limitations imposed by the U.S. Environmental Protection Agency, via the Kansas Department of Health and Environment.

Attached Figure 1 shows the location for the additional sanitary sewer outfall line, new headworks, pretreatment upgrades and the location of the new treatment cell. Also is shown is the area anticipated to be used for borrow soil to construct the new cell. Work will be performed at any or all of these locations. The entire area as delineated on Figure 1 is included in this request.

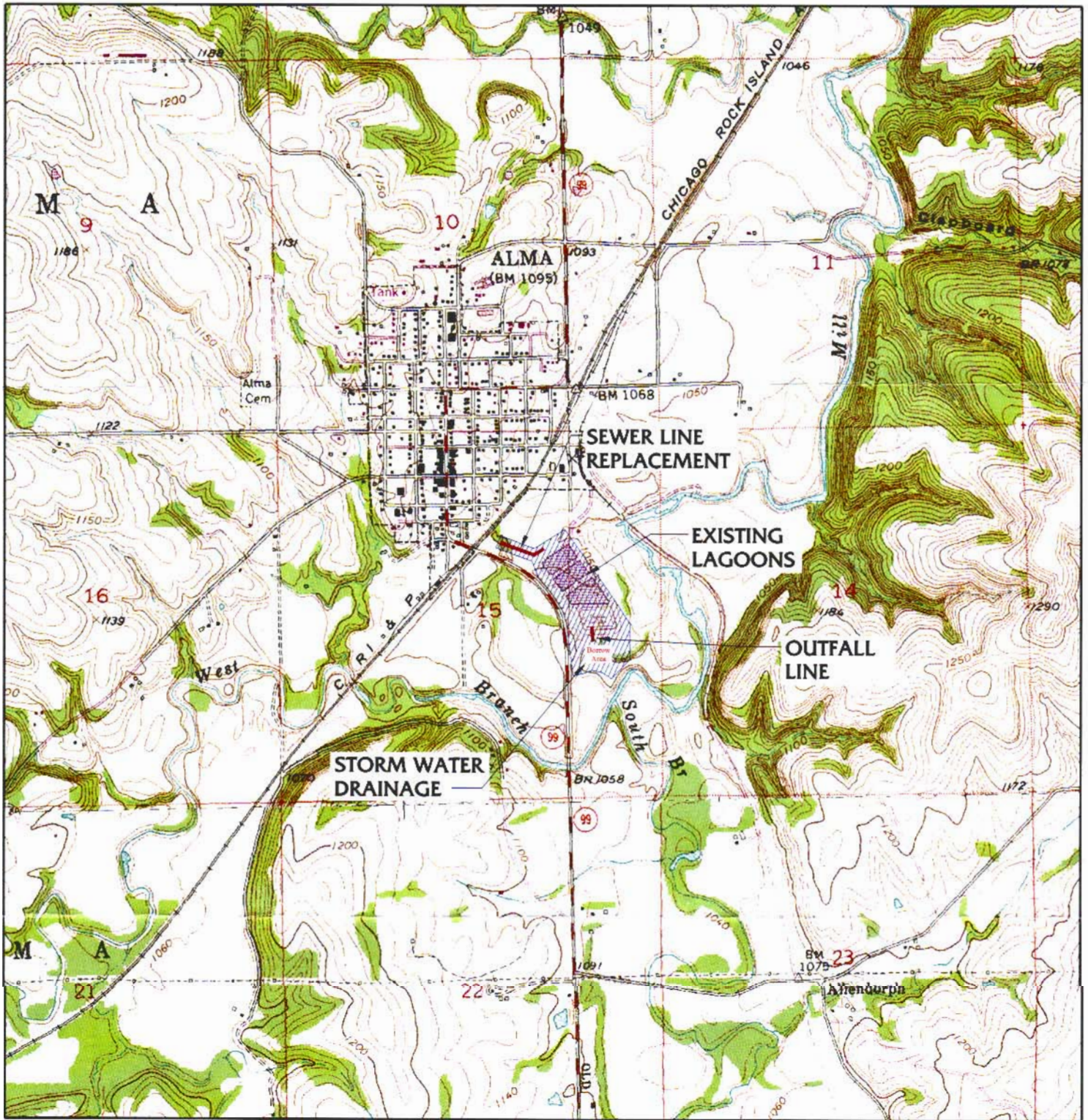
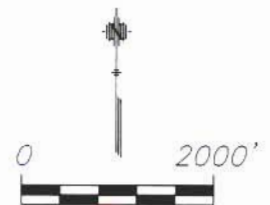


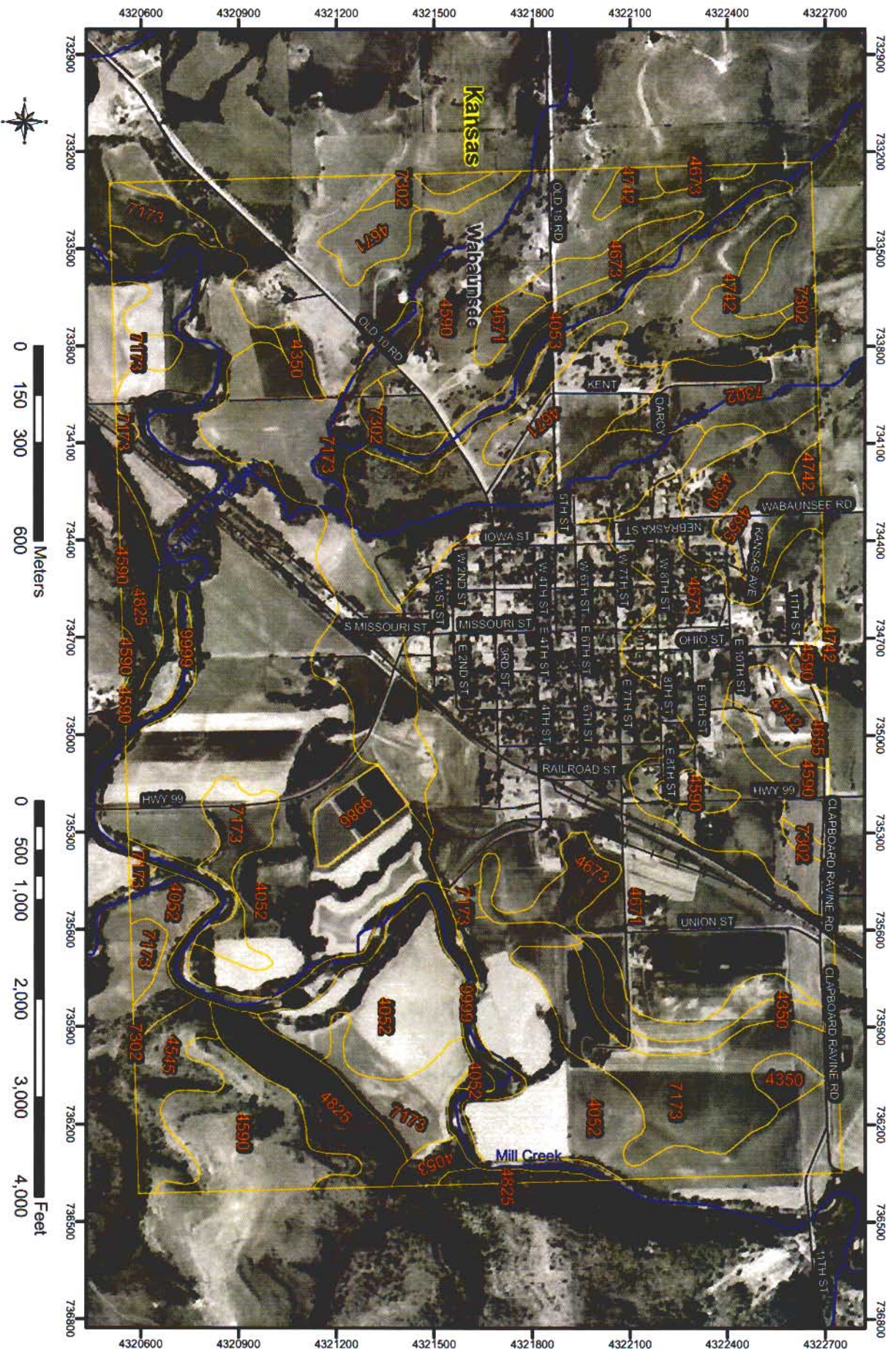
FIGURE 1
SITE LOCATION MAP
WWTF ALMA, KANSAS



EBH & Associates
 ENGINEERS, PLANNERS & SURVEYORS

Evans-Bierly-Hutchison & Associates, P.A.
 Offices in Kansas
 Great Bend, Cimarron, Goodland,
 Neodesha, & Pratt

SOIL SURVEY OF WABAUNSEE COUNTY, KANSAS



SOIL SURVEY OF WABAUNSEE COUNTY, KANSAS

MAP LEGEND

	Soil Map Units
	Cities
	Detailed Counties
	Detailed States
	Interstate Highways
	Roads
	Rails
	Water
	Hydrography
	Oceans
	Escarpment, bedrock
	Escarpment, non-bedrock
	Gulley
	Levee
	Slope
	Blowout
	Borrow Pit
	Clay Spot
	Depression, closed
	Eroded Spot
	Gravel Pit
	Gravelly Spot
	Gulley
	Lava Flow
	Landfill
	Marsh or Swamp
	Miscellaneous Water
	Rock Outcrop
	Saline Spot
	Sandy Spot
	Slide or Slip
	Sinkhole
	Sodic Spot
	Spoil Area
	Stony Spot
	Very Stony Spot
	Perennial Water
	Wet Spot

MAP INFORMATION

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 14
Soil Survey Area: Wabaunsee County, Kansas
Spatial Version of Data: 4
Soil Map Compilation Scale: 1:24000

Map comprised of aerial images photographed on these dates:
10/17/1991

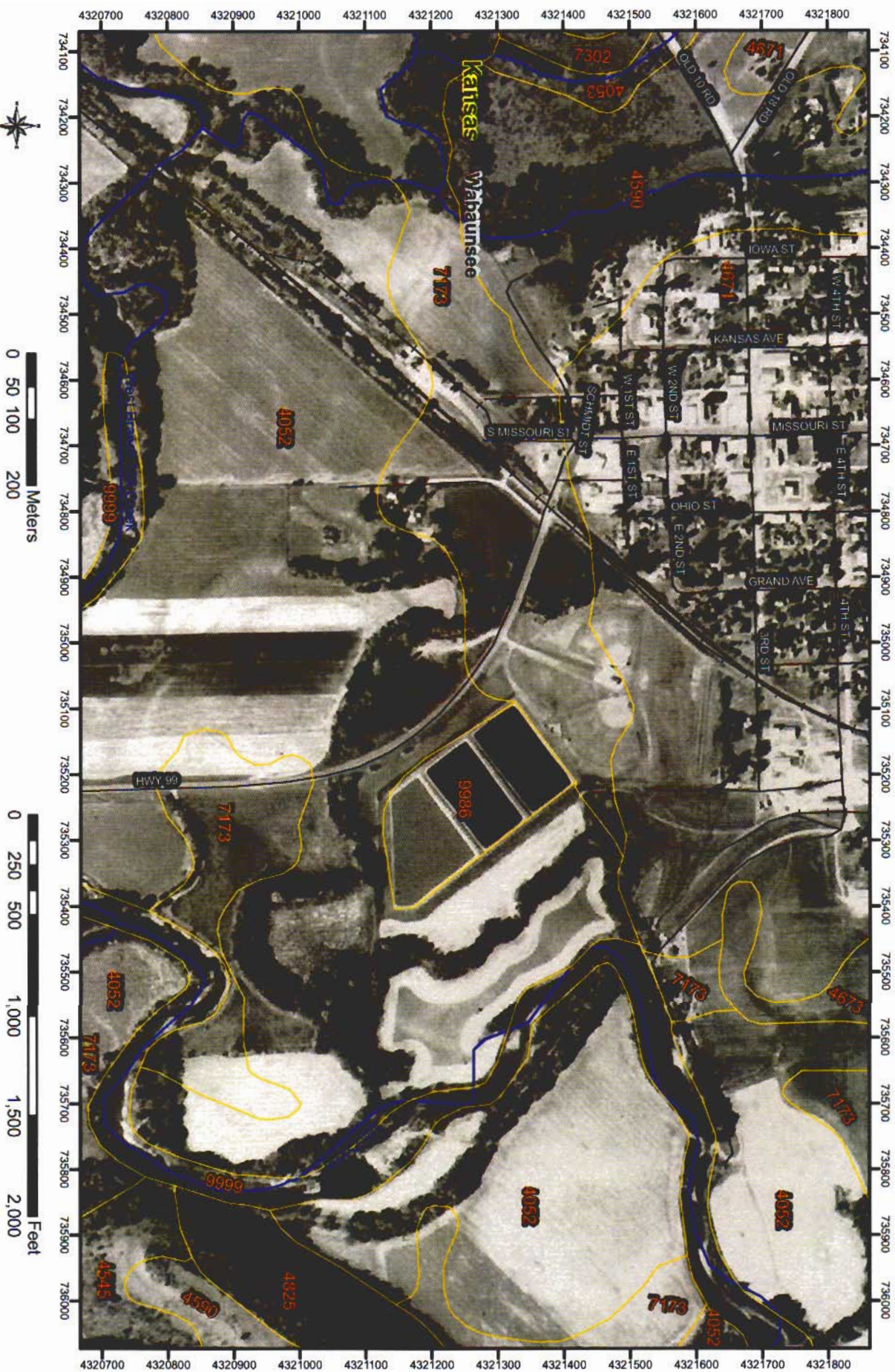
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend Summary

Wabaunsee County, Kansas

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4052	Ivan silt loam, occasionally flooded	406.2	24.2
4053	Ivan silty clay loam, channeled	26.2	1.6
4350	Chase silty clay loam, rarely flooded	21.2	1.3
4545	Clime silty clay loam, 20 to 40 percent slopes, stony	22.5	1.3
4590	Clime-Sogn complex, 3 to 20 percent slopes	367.5	21.9
4655	Florence-Labette complex, 2 to 12 percent slopes	14.6	0.9
4671	Irwin silty clay loam, 1 to 3 percent slopes	302.2	18.0
4673	Irwin silty clay loam, 3 to 7 percent slopes	144.8	8.6
4742	Labette silty clay loam, 3 to 7 percent slopes	29.6	1.8
4825	Tuttle channery silty clay loam, 20 to 60 percent slopes, stony	47.0	2.8
7173	Reading silty clay loam, rarely flooded	203.6	12.1
7302	Martin silty clay loam, 3 to 7 percent slopes	43.6	2.6
9986	Miscellaneous water	11.9	0.7
9999	Water	40.6	2.4

SOIL SURVEY OF WABAUNSEE COUNTY, KANSAS



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