

KANSAS GEOLOGICAL SURVEY

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

Sunflower Electric Power Corporation
Hays, KS 67601

May 3, 2006

Summary Comments for Sunflower Electric Corporation Ethanol proposal

- 1) Soils in the area are predominantly Bridgeport clay loam with minimal sand in the composition. However there are areas of Bayard fine sandy loam which presumably has more sand in the profile although I have not seen a textural analysis of the soil. The NRCS may have more information on the soils. The areas with Bayard fine sandy loam soils need to be evaluated in terms of potential leaching of any possible contaminants as a result of the plant processing and disposal methods.
- 2) One of the considerations for the site is the availability of water. This area of Hamilton County is underlain by the High Plains Aquifer at depth. Well records in the area indicate that the City of Syracuse has wells in the Arkansas River alluvium but the wells are located in sections 19 and 22. Domestic wells in section 8 indicate depths ranging from 250 to 350 feet deep with depth to water of approximately 90 ft depth.

No information was presented in terms of processing methods. A brief internet search indicated approximately 600 gallons of water as steam per batch of mash processing is needed. This item needs to be addressed in terms of saturated thickness available in the area and quantity of water needed to produce ethanol.

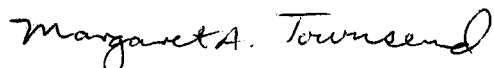
- 3) No information was presented in terms of disposal methods. I presume that there will waste from the plant material utilized for the process as well as mash that is created during the process. The method of disposal needs to be addressed. Will it be on land disposal? Composting? Export for animal feed? Burning? The concern is if the material is composted and/or land applied in some form the nitrogen loading on the land needs to be addressed in order to prevent potential nitrate leaching to groundwater.

The soil type is a moderate permeability soil but depending upon previous farming practices the soil may have preferential flow channels due to existing/decaying roots in the unsaturated zone. These could permit rapid movement of water to the ground water table and permit contaminants to move if present. Previous work by the Kansas Geological Survey and the U.S. Geological Survey in other parts of the High Plains aquifer indicates the presence of preferential flow macropores in the unsaturated zone and the presence of contaminants such as nitrate and atrazine at the water table (generally > 100 feet depth). If there are disposal issues the soils should be evaluated by NRCS or other soil scientists to determine if preferential flow would permit movement of potential contaminants to the groundwater.

If there are questions concerning my comments please feel free to contact me. It may be that these items have been addressed in materials unavailable to me at this time.

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 proposed. 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,

A handwritten signature in cursive script that reads "Margaret A. Townsend". The signature is written in dark ink and is positioned above the printed name.

Margaret A. Townsend
Hydrogeologist

AGENCY REVIEW TRANSMITTAL FORM

Comments by: Kansas Geological Survey

Transmittal Date: 04/12/06

PROJECT TITLE: Cottonwood Farms, Inc.

Notification of
Intent

☒

Pre-application

CONTACT PERSON: Nicole Pfannenstiel, Member Services Specialist

Final Application

Direct
Development

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

RETURN TO:

Nicole Pfannenstiel, Member Serv. Spec.
Sunflower Electric Power Corporation
PO Box 1020
Hays, KS 67601

PART I

REVIEW AGENCIES/COMMISSIONS

☐ Aging	☒ Education/Geological Survey, KS	☐ State Forester
☐ Agriculture - DWR	☐ Health & Environment	☒ Transportation
☐ Biological Survey, KS	☐ Historical Society	☐ Water Office, KS
☐ Conservation Commission	☐ Social & Rehabilitation Services	☐ Wildlife & Parks
☐ Corporation Commission	☐ Kansas Dept. of Commerce	☐ City/County
☐ Commerce	☐ Certified Development Company	☐ Human Resources

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

AGENCY REVIEW COMMENTS

See attached comments.

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 (in the final application) address and clarify the questions or concerns indicated below.
☐ Clearance of the project should not be granted.	
☐ Clearance of the project should be delayed until the issues or question shave 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 the above comments.	

DIVISIONS/AGENCY/COMMISSION

Reviewer's Name: *Margaret A. Townsend*

Date: *5-9-06*



SUNFLOWER ELECTRIC POWER CORPORATION

A Touchstone Energy® Cooperative 

April 12, 2006

William Harrison
Kansas Geological Survey
1930 Constant Ave., Campus KU West
Lawrence, KS 66047

RE: Request for Intergovernmental and Environmental Comments on Application for Rural Economic Development Loan project for Cottonwood Farms, Inc.

Pursuant to the above project, please be advised Wheatland Electric Cooperative, Inc. of Scott City, Kansas will be submitting a Rural Economic Development loan application for Cottonwood Farms, Inc.

The purpose of the \$740,000 loan is to provide financing assistance to the company to construct an ethanol production facility in Hamilton County, Kansas. The total project cost is \$5,000,000. The company will provide the supplemental financing.

This project will comply with appropriate state laws concerning the application. The application will be sent to Brandon Prough, USDA Rural Development, 2715 Canterbury Drive, Hays, KS, 67601.

I request that you do the following:

1. Review the application information for program or environmental impacts.
2. Provide comments on attached Exhibit D form within 30 days.
3. Please mail or fax these responses to: Nikki Pfannenstiel
Sunflower Electric Power Corporation
PO Box 1020
Hays, KS 67601
VOICE (785) 623-3334
FAX (785) 623-3328

Please call me if you have any questions.

Sincerely,



Nikki Pfannenstiel
Member Services Specialist

PROJECT DESCRIPTION

Cottonwood Farms, Inc., a Kansas corporation, is requesting funding from USDA Rural Development in the amount of \$740,000 through the Rural Economic Development Loan Program. Cottonwood Farms is working with Wheatland Electric Cooperative to submit the application to USDA.

On April 3, 2006, Cottonwood Farms, Inc., purchased an 18 acre tract of real estate north of Highway 50 and east of the city of Syracuse, Kansas to construct a manufacturing plant which will annually produce 7,000,000 gallons of ethanol.

This property was selected as the best location for the plant site because it contains one 80'X150' steel building that can be used to house the ethanol plant inside structures and one 40'X40' steel and concrete block building that can be used as the administrative office building. Other advantages to this location are its relative location to existing grain storage facilities, proximity to major distribution channels and distance from other ethanol plants. The ethanol production equipment will be housed in the existing 80' x 150' building. New grain storage and unloading equipment will be added to the site. The site is just north of Burlington Northern & Santa Fe Railroad mainline and along Highway 50. The plant will have the facilities to receive grain by truck and to load ethanol and distiller's grain onto trucks. The facilities to receive grain and to load ethanol onto rail are located within ¼ mile of plant location.

The legal description of project site is:

SW ¼ of Section 8, Township 24 South, Range 40 W of the Sixth Principal Meridian.

The site is currently zoned for commercial activities. An application for an air permit has been submitted to the Kansas Department of Health & Environment for this project.

Hamilton County does not participate in the National Flood Insurance program, as no flood zone has been identified for the county.

For specific information about this project, please contact:

Name: Colonel Laster

Organization: Cottonwood Farms, Inc. & Cottonwood Farms Ethanol Plant

Address: HC 1, Box 1

Phone: 620 372 2812

Cellular: 620 384 4020

Fax: 620 372 4029

E-mail: laster@pld.com

Plant Site

