

KANSAS GEOLOGICAL SURVEY

1930 Constant Ave., Campus West
The University of Kansas
Lawrence, Kansas 66047-3726
phone 785-864-3965
fax 785-864-5317

Proposed Project for Application to the Kansas Department of Health and Environment for the Kansas Water Pollution Control Revolving Loan Fund

Applicant: City of Halstead
Wastewater Treatment Facility – Sludge Handling Improvements

Contact Person: Jason M. Schlickbernd, P.E.
Address: Wilson & Company, Inc.
1700 East Iron Avenue
P.O. Box 1640
Salina, KS 67402-1640

Sent to the Kansas Geological Survey for environmental review.

Agency Review Comments:

The long-term benefits of the proposed sludge handling improvements, which should reduce the amount of pathogens in runoff from intense rainstorms or during flooding of the Little Arkansas River that reaches the area of field-applied sludge, should offset any short-term adverse environmental impacts during construction.

Recommended Action:

- ☒ Clearance of project should be granted
- ☐ Clearance of project should not be granted
- ☐ Clearance of project should be delayed until the issues or questions have been clarified
- ☐ Clearance of project should not be delayed, but the applicant (in the application) should address or clarify the questions or concerns indicated above

Donald Whittemore
Reviewer's Name

Geohydrology Section, Kansas Geological Survey
Division/Agency

8/22/06
Date


Reviewer's Signature

The above discussion represents our best assessment based on the information that the Kansas Geological Survey has about this locality and/or proposed project at the time of this writing. Other geologic conditions, not discussed herein, or for which the Kansas Geological Survey has no knowledge, may affect the viability or safe operation of this facility or property. The information provided in this letter is from regional or county-wide studies and should not be used as a substitute for detailed site characterization by a licensed geologist or engineer. It is the responsibility of the applicant to provide any required site characterizations.

WILSON & COMPANY

1700 East Iron Avenue
Salina, Kansas 67401
P.O. Box 1640 67402-1640
785-827-0433
785-827-5949 Fax

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Wilson & Company
Latin America, LLC

3 August 2006

Dr. William Harrison
Kansas Geological Survey
University of Kansas
1930 Constant Avenue – Campus West
Lawrence KS 66047-3726

Re: Environmental Clearance
Wastewater Treatment Facility – Sludge Handling Improvements
Halstead, Kansas
WCI File: X5-410-146/02/70/8200
KDHE Project No.: C20-1739-01

The City of Halstead is seeking funding through the Kansas Water Pollution Control Revolving Loan Fund as administered by the Kansas Department of Health and Environment (KDHE) for the construction of sludge handling improvements at the existing wastewater treatment facility. The proposed sludge handling improvements include: a 30' -0" diameter reinforced concrete sludge holding tank, a floating aerator/mixer, piping, valves, and necessary appurtenances. A more detailed description of the proposed improvements is attached. A copy of the cover sheet to the City's proposed loan application is also attached for reference.

As part of the Intergovernmental Review process, we are asking for your agency to review and comment on the proposed project. An Agency Review Transmittal Form is included for your convenience. Please complete Parts I and II, as appropriate, and return the form to my attention. Your response is requested by 5 September 2006.

WILSON & COMPANY



Jason M. Schlickbernd, P.E.
Project Manager

Enclosures

cc: J.R. Hatfield, City Administrator, City of Halstead (w/ Enclosure)

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WILSON & COMPANY, INC. ENGINEERS & ARCHITECTS

PROJECT DESCRIPTION

City of Halstead, Kansas
Wastewater Treatment Facility
Sludge Handling Improvements

Background

The City of Halstead's wastewater treatment facility receives raw sewage from the City's sanitary sewage collection system and discharges treated effluent to the Little Arkansas River. In addition to effluent water, the wastewater treatment process also generates waste sludge which is applied to land owned by the City of Halstead, located adjacent to the wastewater treatment facility. The disposal of this sludge is regulated by the US Environmental Protection Agency (EPA) in their 40 CFR Part 503 Sludge Regulations. A map showing the general location of the existing wastewater treatment facility and waste sludge application site is attached.

To assure compliance with these EPA sludge disposal regulations, the City is required to submit an annual sludge report to the Kansas Department of Health and Environment (KDHE). These reports contain the following information about the land application process: the amount of nitrogen, potassium, and phosphorus in the soil and the pH of the soil; the fecal coliform content of the sludge being applied; and the amount of various heavy metals applied to the land in a given year on a per acre basis and in aggregate on a per acre basis. The annual sludge report for 2004 showed the City of Halstead was in violation of the limitation on fecal coliform content (pathogen reduction). KDHE noted this violation and inspected the wastewater treatment facility. KDHE reported deficiencies in the City's current sludge handling process because it does not comply with the EPA Part 503 Sludge Regulations. As a result of this deficiency, the City contracted with an Engineer to complete a review of the sludge handling process at the wastewater treatment facility.

Project Description

Three sludge handling options were evaluated and the construction of a new sludge holding tank appears to be the best long-term sludge handling process for the City and provides the most flexibility. By constructing a new sludge holding tank, the City could continue to haul and land apply liquid sludge after processing it in the holding tank or the City could haul dewatered sludge by utilizing the existing concrete sludge drying beds after processing it in the holding tank. The proposed project includes the following components as described below:

1. Construction of a 30'-0" diameter concrete sludge holding tank.
2. Installation of a floating mechanical aerator/mixer in the sludge holding tank.

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3. Installation of a telescoping valve in the sludge holding tank for means of drawing off supernatant from the processed sludge.
4. Installation of a submersible sludge pump and appurtenances for pumping processed sludge to existing liquid sludge loadout or existing sludge drying beds.
5. Installation of a jib crane at the sludge holding tank for means of removal of the floating aerator/mixer for maintenance purposes.
6. Installation of necessary piping, valves and other appurtenances.
7. Installation of new flowmeters at existing sludge pumping station.
8. Purchase of a used manure spreader to properly land apply dewatered sludge from the sludge drying beds.

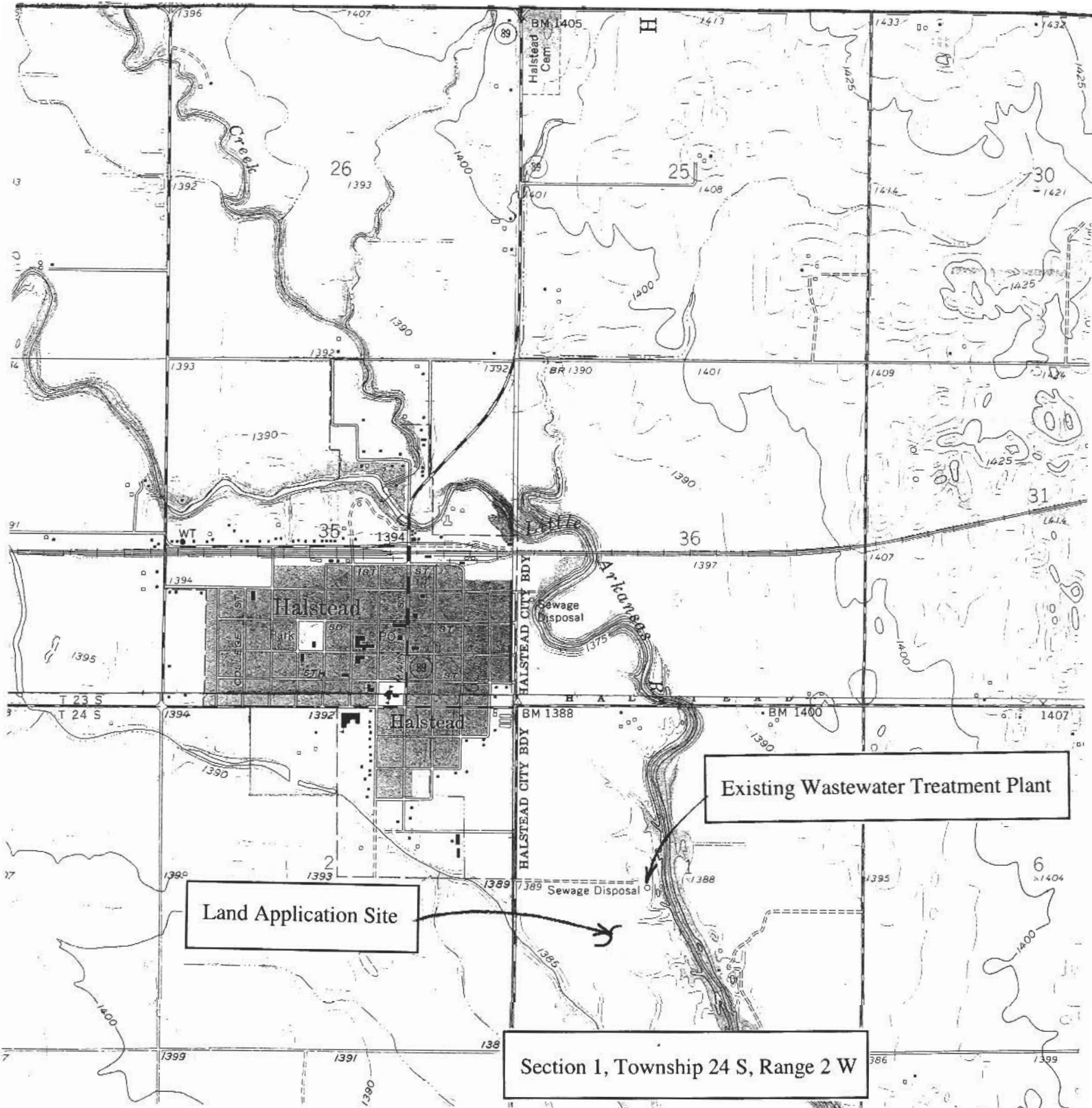
Project Cost

The current opinion of probable costs for the proposed improvements is:

Sludge Handling Improvements Complete	\$187,738
Engineering, Administrative, Legal, and Fiscal Costs	<u>\$ 37,548</u>
Total Probable Project Cost	\$225,286

Project Financing

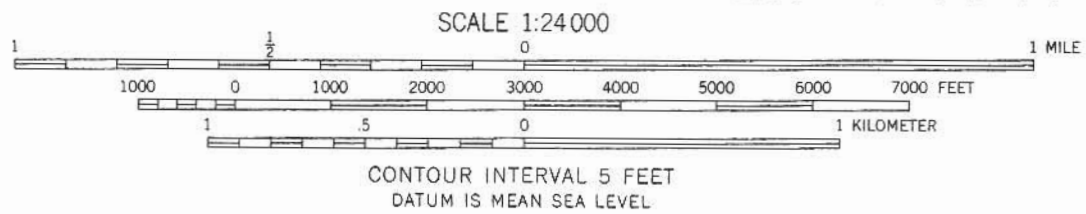
As full financing for the proposed improvements, the City intends to apply for low interest loan funding through the Kansas Water Pollution Control Revolving Loan Fund (KWPCRLF) as administered by KDHE. The loan fund money can be obtained for terms up to twenty years at lower interest rates than commercially available. Loan repayments begin one year after construction completion and can be generated through sewer user charges, sales tax, or general obligation bonds. The City currently intends to generate revenue through sewer user charges to cover annual loan debt service and any increase in operation and maintenance costs.



Land Application Site

Existing Wastewater Treatment Plant

Section 1, Township 24 S, Range 2 W



TRUE NORTH
MAGNETIC NORTH
10°
APPROXIMATE MEAN DECLINATION, 1958

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER 2, COLORADO OR WASHINGTON 25, D. C.
AND BY THE STATE GEOLOGICAL SURVEY, LAWRENCE, KANSAS
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Kansas Department of Health and Environment

APPLICATION FOR SRF LOAN ASSISTANCE		New	Amendment
Project Number	C 20-1739-01	Application Type	X
1. Legal Applicant / Recipient		2. Type of Applicant / Recipient	
Applicant Name	City of Halstead, Kansas	A. City B. County C. Other (Specify) Enter Appropriate Letter A	
Organization Unit	City		
Street / PO Box	303 Main Street/PO Box 312		
City	Halstead		
County	Harvey		
State / Zip code	Kansas / 67056		
Contact Person Name	J.R. Hatfield, City Administrator		
Telephone Number	316-835-2286		
3. Title of applicants project City of Halstead, Wastewater Treatment Facility Improvements			
4. Type of Project Wastewater Treatment Facility - Sludge Handling Improvements			
5. Employer Identification Number		48-6004032	
6. Area of project impact (Names of cities, counties, etc)		City of Halstead - Harvey County	
7a. Congressional District / Applicant		Fourth	
7b. Congressional District / Project		Fourth	
8. Type of change		Increase dollars	\$ -
		Decrease dollars	\$ -
9. Proposed Funding			
SRF Loan 9a.	\$ 225,286	10. Project Start Date 01/01/07 (Estimated) 11. Project Duration 4 mos. (Months) 12. Date Submitted 08/28/06 (To KDHE)	
Applicant 9b.	\$ -		
CDBG 9c.	\$ -		
EPA 9d.	\$ -		
EDA 9e.	\$ -		
Other 9f.	\$ -		
Total	\$ 225,286		
13. Requested Loan Repayment Period (Must not be over 20 years)		20 yrs.	
14. The applicant certifies that: To the best of my knowledge and belief, data in this pre-application / application is true and correct, the document has been duly authorized by the governing body of the applicant and the applicant will comply with the attached assurances if the assistance is approved		This notice of intent / preapplication / application was made available to the state executive order 12372 process for review on: Date	
		Signature 	
15. Certifying Representative			
Name	William H. Ewert		
Title	Mayor		
Mail completed application to: Kansas Department of Health and Environment Bureau of Water / Attn: Rod Geisler Municipal Programs Section, Suite 420 1000 SW Jackson Street Topeka, KS 66612-1367		If you need assistance please contact: Bill Mond Administrative / Finance Section, Suite 420 1000 SW Jackson Street Topeka, KS 66612-1367 785-296-4049	

AGENCY REVIEW TRANSMITTAL FORM

Comments by: Kansas Geological Survey 3 August 2006

Project Title: City of Halstead, Kansas
Wastewater Treatment Facility – Sludge Handling Improvements
KDHE Project No. C20 1739-01

Contact Person: Jason M. Schlickbernd, P.E.
Project Manager

Return To: Jason M. Schlickbernd, P.E.
Wilson & Company, Inc.
1700 East Iron Avenue
P.O. Box 1640
Salina, KS 67401

This form provides notification and the opportunity for your agency to review and comment on the proposed project. Please complete Parts I and II as appropriate. Your response by **5 September 2006** will be appreciated.

PART I - AGENCY REVIEW COMMENTS:

PART II - RECOMMENDED ACTION COMMENTS:

- ☐ Clearance of the project should be granted.
 - ☐ Clearance of the project should not be granted.
 - ☐ Clearance of the project should be delayed until the issues or questions have been clarified.
 - ☐ Clearance of the project should not be delayed, but the applicant should (in final design and/or permit application) address and clarify the questions or concerns indicated above.
 - ☐ Request the opportunity to review final design and plans.
-

Reviewer's Name: _____

Date: _____