

# 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 Public Water Supply Loan Fund, and to the Kansas Department of Commerce for a Community Development Block Grant**

Applicant: City of Effingham  
Water Supply, Storage, and Distribution System Improvements

Contact Person: Cara C. Hendricks, P.E.  
Address: Kramer Engineering, P.A.  
2348 SW Topeka Blvd.  
Topeka, KS 66611-1286

Sent to the Kansas Geological Survey for environmental review.

**Agency Review Comments:**

The project description did not indicate why Well No. 3 is currently considered as a non-potable well. Is this because the ground-water quality is unsuitable at the location of the well? If so, what measures will be taken to treat the water? Is the well considered as a non-potable well because the construction can allow surface water to flow down the casing due to a poor annular seal? If so, then proper sealing could remedy the well. Are there other issues with Well No. 3?

If Well No. 3. is brought on line along with the other two water-supply wells, will the amount of water exceed the maximum allowed in the water rights of the City?

Assuming that appropriate answers exist to address the above questions, the long-term benefits of the improvements to the water supply system 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

8/21/06  
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.



**KRAMER ENGINEERING, P. A.**

*CONSULTING ENGINEERS • SURVEYORS*

2348 SW TOPEKA BLVD • TOPEKA, KANSAS 66611 • 785-234-6600 • FAX 785-234-6611

August 3, 2006

Re: Water Supply, Water Storage and  
Water Distribution System Improvements  
City of Effingham, Kansas  
Kansas Public Water Supply Loan Fund  
KPWSLF Project No. 2461

Dear Addressee:

Enclosed for your comments are Intergovernmental Review Forms for the referenced project with attached project description and site location map. Please complete the transmittal form and return it to our office by September 3, 2006.

The City of Effingham, Kansas is preparing an application to the Kansas Department of Health and Environment for a loan from the Kansas Water Supply Loan Fund and CDBG grant funds administered by the Kansas Department of Commerce for the referenced project. This project will comply with appropriate state laws concerning the application.

If you have any questions about the review or the project, please contact me at 785-234-6600.

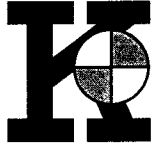
Sincerely,

KRAMER ENGINEERING, P.A.

Cara C. Hendricks, P.E.  
Project Engineer

CCH/ak

Enclosures



## **KRAMER ENGINEERING, P. A.**

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### **WATER SYSTEM IMPROVEMENTS CITY OF EFFINGHAM, KANSAS**

KPWSLF Project No. 2461

**August 3, 2006**

The City of Effingham, Kansas, (City) is located in Atchison County, west of the City of Atchison and northeast of Topeka, KS, just east of Highway 159. According to current records, the City has a population of approximately 588 persons. The City's water system serves a total of 272 meters, which include 538 residential meters, 15 commercial meters, and 20 meters that serve the church, the City's schools, and City utilities. The planning area for this project is all land within the city limits of Effingham.

The existing water system consists of two water supply wells, chlorination building, distribution system, elevated water tower, and one non-potable well. The untreated water is withdrawn from the two water supply wells and chlorinated at the chlorination building, as shown on the attached Site Location Map. The chlorinated water is stored in the elevated storage tank located in the west-central part of the City and is distributed throughout the water distribution system.

Improvements to the existing water system are being made so the City can provide adequate water supply to its existing and future residents, and maintain minimum recommended system pressures throughout the distribution system. The City's existing water system has not been adequate to meet the needs of the City's customers. The City has stated that during peak water usage, the storage tank has emptied, and that the system was unable to keep up with the maximum demands placed on it by its water customers. When the tower empties, the water system is unable to maintain the minimum recommended pressures.

The City has decided to construct well improvements that include a new chlorination building, and the conversion of Well No. 3 into a potable water supply well. The new chlorination building will be installed directly east of the existing building on public right-of-way. The City will also install a back-up generator for the wells, and will construct line improvements throughout the City's distribution system in order to provide looping and replace old water mains. A new 100,000 gallon elevated storage tank will be constructed to replace the City's original tank built in 1929, and will provide the City with emergency storage, fire protection, and will allow the system to maintain minimum water pressures during peak usage. The proposed location for the new storage tank is directly east of the existing tank on property currently owned by the City.

The opinion of probable project cost is \$1,141,000, which includes engineering, legal, testing, inspection services, construction, equipment, materials, supplies, labor, and administrative fees all needed to complete the project. The City plans to finance the project with Kansas Public Water Supply Loan Funds administered by KDHE, and CDBG grant funds. Also, the City expects to increase water rates to repay any borrowed funds.

ATCHISON COUNTY, KANSAS  
SECTIONS 15, 22  
TOWNSHIP 6S  
RANGE 18E

Planning Area  
(City Limits)

PROPOSED LOCATION FOR  
NEW WATER TOWER

EXISTING  
WATER  
TOWER

EXISTING WATER  
SUPPLY WELLS

PROPOSED LOCATION FOR  
NEW CHLORINATION BUILDING

SITE LOCATION MAP  
EFFINGHAM, KANSAS

INTERGOVERNMENTAL REVIEW TRANSMITTAL FORM

Comments By: Kansas Geological Survey Transmittal Date August 3, 2006

Project Title: Water Supply, Water Storage and Water Distribution System Improvements,  
City of Effingham, Kansas

Contact Person: Cara C. Hendricks, P.E., Project Engineer

Return To: KRAMER ENGINEERING, P.A.  
2348 SW Topeka Blvd.  
Topeka, Kansas 66611-1286

This form provides notification and the opportunity for your agency to review and comment on the proposed project as required by Executed Order 12372. Please complete Parts I and II as appropriate. Your response by September 3, 2006 will be appreciated.

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PART I - AGENCY REVIEW COMMENTS:

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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 application prior to submission to the federal funding agency.
  - ☐ Request the State Process Recommendation in concurrence with above comments.
- 

Reviewer's Name: \_\_\_\_\_

Date: \_\_\_\_\_



## KRAMER ENGINEERING, P. A.

CONSULTING ENGINEERS • SURVEYORS

2348 SW TOPEKA BLVD • TOPEKA, KANSAS 66611 • 785-234-6600 • FAX 785-234-6611

September 12, 2006

Donald Whittemore  
Kansas Geological Survey  
1930 Constant Ave., Campus West  
The University of Kansas  
Lawrence, Kansas 66047-3726

Re: City of Effingham, Kansas  
Water Supply, Storage, and Distribution System Improvements

Dear Mr. Whittemore:

This letter is in response to your Agency Review dated August 21, 2006 of the above-referenced project for the City of Effingham. Your review contained comments related to the City's proposed water project. The comments have been addressed below.

- In response to your question regarding the quality of Well No. 3 (the City's non-potable well), the City's well is currently not chlorinated. At the time of the proposed improvements, the well will be tested to ensure water quality; however, at this time there are no known issues with Well No. 3. It is recommended that the City chlorinate the well so that it can be used as a water supply well.
- Regarding the City's water rights, with the addition of the third well as a water supply well, the amount of water will not exceed the maximum allowed by the City's water rights.

If you have any questions or need additional information regarding the project, please contact me.

Sincerely,

KRAMER ENGINEERING, P.A.

Cara C. Hendricks, P.E.  
Project Engineer

pc: William Carr, KDHE