

February 19, 2009

Mrs. Clelia McCrory, ESSDACK Grants/CTE
402 S. 6th
Sterling, KS 67579

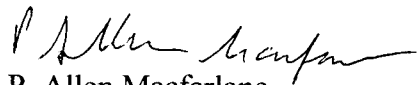
Dear Mrs. McCrory,

I have reviewed the proposed project to drill and complete a new well to replace your well 5 that recently was damaged beyond repair. Based on the documents attached to your request and a review of the data on file here at the Survey, it does not appear that there are any potential geologic hazards worth noting that might impact this project. Please note that the damaged well should be plugged according to Kansas Department of Health and Environment regulations. Note also that since you wish to construct a replacement well, you will have to notify and apply for the appropriate permits from the Division of Water Resources, Kansas Board of Agriculture.

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 countywide 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.

If you have questions please do not hesitate to contact me at my office (785 – 864-2068).

Sincerely yours,


P. Allen Macfarlane

AGENCY REVIEW TRANSMITTAL FORM

RE: Hoisington Replacement of Water Well located at:
NW, NW, SW, SEC. 9 T-19-S, R-13-W (south of Hoisington, KS)

Comments by: Kansas Geological Survey

Transmittal Date: _____

This form provides notification and the opportunity for your agency to review and comments on this proposed project as required by NEPA. Review Agency, please complete Parts II and III as appropriate and return to contact person listed below. As this is an **urgent need project**, your prompt response will be appreciated.

RETURN TO:

Mrs. Clelia McCrory, ESSDACK Grants/CTE
402 S. 6th
Sterling, KS 67579

PART I Review Agencies/Commission

☐ Aging	☐ Education	☐ State Forester
☐ Agriculture	☒ Geological Survey, KS	☐ Transportation
☐ Biological Survey	☐ Health & Environment	☐ Water Office, KS
☐ Conservation Commission		☐ Historical Society
☐ Corporation Commission		☐ Wildlife and Parks
☐ Social & Rehabilitation		☐ Commerce
☐ Federal Emergency Management Agency (FEMA)	☐ US Fish & Wildlife Service	
☐ US Environmental Protection Agency	☐ US Army Corps of Engineers	

PART II Agency Review Comments

COMMENTS: (Attach additional sheet if necessary) Re:

PART III Recommended Action Comments

☒ Clearance of the project should be granted. The agency has a finding of No Significant Impact (FONSI)

☐ Clearance of the project should not be granted. The agency has a finding of Significant Impact

☐ Clearance of the project should be delayed until the issues or questions above have been clarified.

☐ Request a State Process Recommendation in concurrence with the above comments.

☐ Clearance of the project should not be delayed but the Applicant should (in the final application) address and clarify the question or concerns indicated above.

☐ Request the opportunity to review final application prior to submission to the federal funding agency.

DIVISIONS/AGENCY/COMMISSION

Reviewer's Name: P. Allen MacFarlane Date: 2/19/05

Organization: Kansas Geological Survey

1930 Constant Avenue

Lawrence, KS 66047-3726

Hoisington, KS
February 13, 2009

Kansas Geological Survey
1930 Constant Avenue
Lawrence, KS 66047-3726

Dear Sir:

The City of Hoisington is undergoing the environmental review process as part of its CDBG Urgent Needs project to replace water well number 5. The firm capacity of the remaining Hoisington wells is insufficient to provide sustained fire fighting flows and will not meet peak demands this spring and summer. The current capacity presents a potential threat to the health and safety of Hoisington's residents.

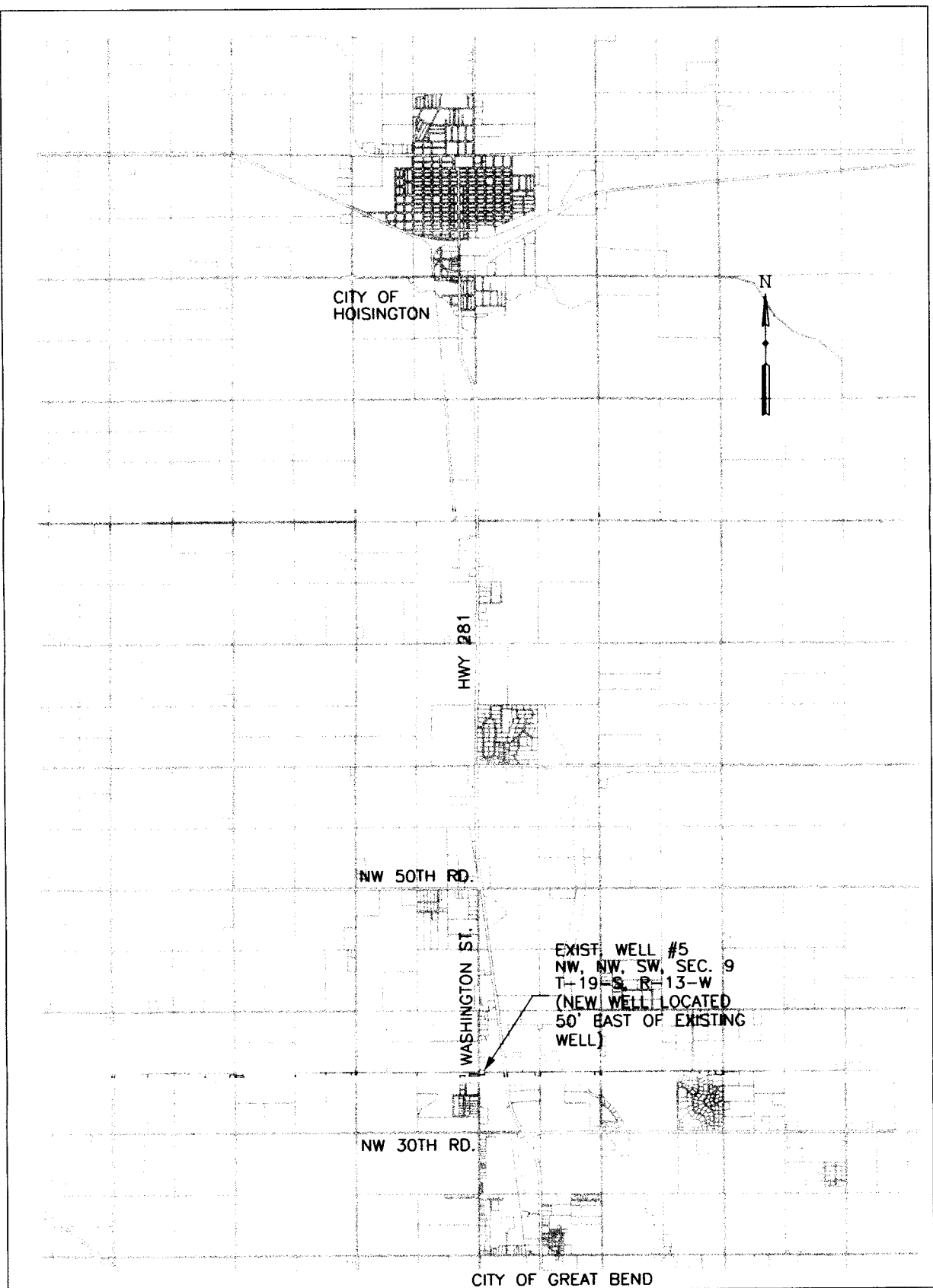
According to the engineer, there is only one viable option by which to solve the water supply well issue and that is to construct a new well to replace the damaged well. The new well would be located adjacent to the east of the existing well (within 50 feet) and remain on City owned property. The new well would be piped into the existing transmission line from its new location and electrical service can be routed from the existing building to the new well.

The City of Hoisington is checking with your agency in order to evaluate the impact of the project located at this **legal description (NW, NW, SW, SEC.9 T-19-S, R-13-W)** that is also marked on the accompanying engineering map labeled BWR Hoisington 1) upon the human and natural environment and then describe any actions or conditions that are needed to mitigate or minimize adverse impacts. After reviewing our proposed project, please notify Mrs. Clelia McCrory, the city's CDBG Grant Administrator at her address below by using the accompanying form whether or not we have resolved all environmental concerns by no later than February 28th, 2009.

Sincerely,

Mrs. Clelia McCrory

Mrs. Clelia McCrory, ESSDACK Grants/CTE
Home Office: 402 S. 6th, Sterling, KS 67579 (cell: 620-694-9289)
Acting On behalf of the City of Hoisington (Donita Crutcher, Interim City Manager)



BWR
Right in the Center

2335 E. Crawford Street | Salina, Kansas 67401-3713
P 785.827.3603 | F 785.827.3029

**CITY OF HOISINGTON
PROPOSED WELL IMPROVEMENTS**

DESIGNED BY	DRAWING NAME	PROJECT NO.	SHEET
CRL		2008-0749.00	1
CHECKED BY	REFERENCE SHEET	REVISION DATE	ISSUE DATE

GENERAL

The City of Hoisington is a community of approximately 3,000 residents, located ten miles north of Great Bend in Barton County. The City of Hoisington also serves the South Hoisington area which receives City water prior to the water treatment plant.

The City obtains its water from a well field located approximately six and one half miles south of town. A booster station located between the City and well field is utilized to enhance flow and pressure through the transmission line. The water is initially chlorinated at the well field and further softened, stabilized and filtered at the water plant prior to entering the distribution system.

The City's largest producing well, Well No. 5, became inoperable on October 15, 2008. The City had the well investigated by a local well service company and it was determined the well was not repairable. The reported source of the problem is believed to be a failure in the casing/screen and or screen that is allowing gravel to enter the well. The sudden failure of the casing/screen caused the water to become very dirty and unusable for consumption. In addition, the gravel has damaged the pump to the point where it is non operable and will have to be repaired or replaced.

SYSTEM OPERATION

The City's existing water supply consists of four groundwater wells. The wells produce 280 to 800 gallons per minute (gpm).

<u>Well</u>	<u>GPM</u>
No. 2	Dry
No. 4	600
No. 5	800
No. 6	280

The average water usage for the City is approximately 350,000 gallons per day (gpd) with an average peak demand of approximately 1,000,000 gpd (700 gpm) at the plant. On rare occasions larger flows are recorded at the plant. The average peak demand for the system exceeds the City's current maximum well capacity of 600 gpm. The risk of running out of water during peak times of usage is a major concern.

Well No. 5 was initially drilled in 1979 to a depth of 128 feet. At the time of the investigation, the well had a total depth of 116.5 feet due to gravel entering the well. An attempt was made to remove the excess gravel from the well. As the gravel was removed additional gravel continued to enter voided space.

Well No. 6 currently is not operated in conjunction with the larger wells. Hydraulically, the pump cannot overcome the system pressure created by the larger wells when they are operating. Therefore, Well No. 6 can only be used on emergency basis when system demand is very low.

ALTERNATIVES

There is only one viable option by which to solve the water supply well issue and that is to construct a new well to replace the damaged well.

The new well would be located adjacent to the existing well (within 50 feet) and remain on City owned property. The new well would be piped into the existing transmission line from its new location and electrical service can be routed from the existing building to the new well.

OPINION OF PROBABLE COSTS

The following is a summary of estimated costs to implement the capital improvements. The engineer has no control over the cost of labor, materials or equipment furnished by contractors, or over competitive bidding or market conditions. The Engineer's opinion of probable Project cost or construction cost is based on the experience and best judgment of the Engineer, however, the Engineer cannot and does not guarantee these estimated costs.

Well & Pump Replacement	\$73,200	
Electrical	\$30,000	
Security Fence	\$5,000	
Fittings to Connect to System	<u>\$5,000</u>	
Sub-Total		\$113,200
Engineering Services	<u>\$12,450</u>	
Total	<u>\$125,650</u>	

Conclusion

As stated previously, there is only one viable option by which to solve the water supply well issue and that is to construct a new well to replace the collapsing well. If the City's supply is not adequate to keep up with demand, flow and pressures along the transmission line will drop and all services along the transmission line and in South Hoisington will potentially fall below the 20 psi threshold stipulated by KDHE design standards. Additionally, loss of this well has reduced the City's extended fire fighting capabilities. Under extended periods of high usage the City's storage reservoirs will be depleted and decrease its capability of fighting a fire.