

August 15, 2008

Bruce Boettcher, P.E.
BG Consultants, Inc.
2508 West 15th Ave.
Emporia, KS 66801

Re: Environmental Review – Matfield Green, KS – Water System Improvements

Dear Mr. Boettcher,

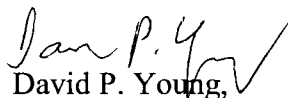
The Kansas Geological Survey (KGS) has received your July 28, 2008 letter requesting us to review the above referenced project. The proposed improvements include modifications to the existing pump house and water tower replacement. The existing water storage tank will be removed.

A review of regional geologic information and project information provided by you indicates that there are no unduly adverse geologic conditions that should affect this project. A completed agency review form is enclosed.

Removal of the City's current water tank could potentially have environmental considerations associated with historical maintenance activities. For example, refurbishing and painting the exterior of old, large painted structures can displace lead paint, if present, sometimes leading to elevated lead levels in the surface soil around the structure. Lead concentrations in the surface soil should be considered.

This letter is an assessment based on the regional geologic conditions available at the KGS and cannot be used in substitute of a detailed site characterization. Other geologic conditions, not discussed herein, or for which the KGS has no knowledge, may affect the viability of the project. It is the responsibility of the applicant to provide any necessary characterization, geotechnical or environmental testing, or design by a licensed professional geologist or engineer to complete the project.

Sincerely,


David P. Young,
Hydrologist

Enclosure

cc: Dan Suchy, KGS Data Resources Library

AGENCY REVIEW TRANSMITTAL FORM

Comments by: D. Young

8/15/08
Transmittal Date

Project Title: **Matfield Green (Water System Improvements)**

☒ Notification of Intent

Contact Person: Ryan Glessner, E.I.T.

☐ Preapplication

☐ 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 the document as appropriate. Your prompt response will be appreciated.

Return To: BG Consultants, Inc.
2508 West 15th Ave.
Emporia, Ks 66801

OR e-mail: ryan.glessner@bgcons.com

phone: (620) 343-7842

PART I (please check the box for your agency or fill in the blank)

REVIEW AGENCIES/COMMISSIONS

- | | | |
|--|---|--|
| ☐ KDOT | ☐ Corps of Engineers | ☐ State Forester |
| ☐ Agriculture – DWR | ☒ Geological Survey, KS | ☐ Transportation |
| ☐ Biological Survey, KS | ☐ Health & Environment | ☐ Water Office, KS |
| ☐ KS Conservation Comm. | ☐ State Historical Society | ☐ Wildlife & Park, KS |
| ☐ KS Corporation Comm. | ☐ EPA | ☐ Fish & Game |
| ☐ National Park Service | ☐ FHA | ☐ _____ |

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

AGENCY REVIEW COMMENTS:

Please see cover letter.

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

RECOMMENDED ACTION COMMENTS:

- | | |
|---|--|
| <p>☒ Clearance of the project should be granted.</p> <p>☐ Clearance of the project should not be granted.</p> <p>☐ Clearance of the project should be delayed until the issues or questions have been clarified.</p> <p>☐ Request a State Process Recommendation in concurrence with above comments.</p> | <p>☐ Clearance of the project should not be delayed but the Applicant should (in the final application) address and clarify the questions or concerns indicated above.</p> <p>☐ Request the opportunity to review final application prior to submission To the federal funding agency.</p> |
|---|--|

DIVISIONS/AGENCY/COMMISSION

Reviewer's Name _____

Date _____

July 28, 2008

Kansas Geological Survey
University of Kansas
1930 Constant Ave.
Lawrence, KS 66047-3726

RE: Environmental Review – Matfield Green, KS – Water System Improvements

Dear Sirs:

The City will be applying for a Rural Development Loan of approximately \$80,500 and a Rural Development Grant of approximately \$34,500 from the United States Department of Agriculture. The City will also apply for a \$115,000 Department of Commerce Block Grant for this project. The improvements will be situated near the current location. The proposed improvements will include modifications to the existing pump house and water tower replacement. Land acquisition will be required for the proposed water tower. The existing water storage tank will also be removed.

The improvements will be in the City of Matfield Green located in Section 6 & 7, Township 22S, Range 8E, Chase County, Kansas.

I am attaching the Explanation of Alternatives and an aerial map of the proposed improvements. The existing lines are shown and any replacement/rehabilitation would be near the same location.

Please submit your response to BG Consultants, Inc., 2508 West 15th Ave., Emporia KS 66801.

Please contact me at (620) 343-7842 with any questions you might have.

Sincerely,



Bruce Boettcher, P.E.

Enc.



Also

Manhattan, KS. • Lawrence, KS • Hutchinson, KS

SECTION 1

INTRODUCTION

1.1 REPORT OBJECTIVE

This study has been prepared for the purpose of planning improvements to the water distribution system currently serving the City of Matfield Green, Kansas. This study provides an analysis of the various components of the system, including supply, quality, storage, and distribution. An evaluation of the condition and capabilities of the distribution system under all potential flow conditions is included. This study will provide a program of capital improvements and upgrades considered necessary.

1.2 EXECUTIVE SUMMARY

OVERVIEW: This study was conducted due to the City's concern about the condition of the existing water tank and distribution system. The majority of the system operates at lower than recommended pressures. The City currently operates with a water loss around **35% to 40%**.

ALTERNATIVES: Several possible alternatives were examined and were discussed with the City. A summary of the alternatives is listed below.

- **NO ACTION** – This is determined to be not an option due to current problems associated with the system.
- **WATER TANK REHABILITATION** – The existing tank is in need of replacement and pressures throughout the system should be increased.
- **WATERTANK REPLACEMENT ONLY**– The existing pump controls are on a timer and needs to be replaced with an automatic control.
- **WATERTANK REPLACEMENT, PUMP CONTROLS, & WATERLINE REPLACEMENT** – This would be the ideal project, however replacing all of the lines in town is not financially feasible.
- **WATERTANK REPLACEMENT & PUMP CONTROLS** – This is the recommended project. The City will have a reliable water supply and storage system for current and future City residents. The City should start a capital improvement plan to replace the aging water lines in town.

FUNDING: There are several different funding options available to the City of Matfield Green. The following is a brief description with the deadlines associated with each funding option.

- Community Block Development Grant (CDBG) – This grant program is a competitive program with a maximum possible grant of \$400,000. The City must attend a KIAC meeting before submitting for the grant. All grant applications must be submitted by the end of September and funds are awarded in January.
- State Revolving Loan Fund (KDHE-SRF) – This SRF loan is a 20 year loan with an interest rate and service fee of around 4%. Projects are selected for funding in May of each year and are competitive with other Cities.
- Rural Development (RD) – The Rural Development loan is a 40 year loan with an interest rate that may vary from 4%-5% and is competitive with other Cities, Counties, etc. The grants are based on a percentage of the project and will not exceed 75%. The Rural Development funding is from a federal pool of money that is awarded in October of each year.

USER RATES: The increase in consumer water rates will be dependent upon which funding option is obtained. The current water rates for the City of Matfield Green are as follows:

CURRENT USER RATES			
<u>USER</u>	<u>NO.</u>	<u>RATE</u>	<u>\$/MO.</u>
Base Rate, City user	34	\$ 15.00	\$ 510
Base Rate, Rural user	8	\$ 18.00	\$ 144
Base Rate, Special	3	\$ 20.00	\$ 60
Additional thousand gallons	55	\$ 3.50	\$ 192
Additional thousand gallons (Special)	5	\$ 4.00	\$ 20
TOTAL (monthly)			\$ 926
TOTAL (yearly)			\$ 11,112

Currently the average user state wide uses approx. 5,000 gallons per month. This would equate to an average monthly water bill of \$25.50

The proposed funding options are as follows with the proposed monthly bill for a 5,000 gallon per month user listed below. A detailed explanation of each option can be found in Section 8.

- CDBG & SRF Loan – With a \$115,000 CDBG grant and a \$115,000 20 year SRF Loan the proposed monthly water bill for a 5,000 gallon per month user would be \$41.50.
- USDA Rural Development – With a 30% grant and a 40 year loan the proposed monthly water bill for a 5,000 gallon per month user would be \$42.50.
- CDBG & USDA Rural Development – With a \$115,000 CDBG grant, a 30% USDA Grant, and a 40 year loan the proposed monthly water bill for a 5,000 gallon per month user would be \$34.50.

1.3 Recommendations

It is recommended that the City of Matfield Green replace the aging and rusted water storage tank. It is recommended that a new chlorination system, pump controls and approximately 550 linear feet of waterline be constructed at the same time. These upgrades are necessary to minimize the OM&R and to provide potable water to the citizens of Matfield Green. The opinion of probable cost for the proposed project is \$230,000. A detailed cost description is located at the end of Section 6.

