

**Proposed Project for Application for Kansas Department of Health and Environment
Public Water Supply Loan Fund and Community Development Block Grant**

Applicant:	City of Ness City KPWSLF Project No. 2416 CDBG Project No. 05-PF-511	
Contact Person:	Gary Gantz, Mayor	Rick Stenzel
Address:	208 West Main P.O. Box 419 Ness City, KS 67560	EBH & Associates 1105 Williams Great Bend, KS 67530-4487

Sent to the Kansas Geological Survey for environmental review.

Agency Review Comments:

The information sent to review did not include sufficient information to be able to determine the water source for the project addition. The project apparently changes the location of a proposed well from T. 19 S., R. 23 W., Sec. 3 to T. 18 S., R. 23 W., Sec 31. The original project apparently planned for three wells in T. 19 S., R. 23 W., Sec. 3 where there are irrigation wells. According to the WWC5 records available at the Kansas Geological Survey, the irrigation wells obtain water from relatively shallow, unconsolidated sand and gravel deposits overlying bedrock to the southeast of Ness City. There are also records of two observation wells drilled and completed in August, 2004 by Clarke Well & Equipment, Inc. for Ness City that are screened in the sand and gravel deposits in the same section as the irrigation wells.

Attachment C provided with the short statement of the general nature of the project addition includes an arrow pointing from a label "PROJECT LOCATION – ADDITION TO ..." to a dot marked "WELL" that is in T. 18 S., R. 23 W., Sec 31. There are shallow sand and gravel alluvial deposits associated with the North Fork of the Smoky Hill River in this area. The attachment map shows a City Well 6 that is probably screened in the alluvial aquifer. Also in the area of this location, there are three observation wells drilled and completed in January, 2003 by Clarke Well & Equipment, Inc. for Ness City screened in the Dakota sandstone aquifer.

It is unclear as to whether the well apparently being added in T. 18 S., R. 23 W., Sec 31 for a City water supply will be screened in the alluvial aquifer or in the Dakota aquifer. If the well is screened in the alluvial aquifer, the City will need to monitor the apparent ground-water contamination to the north within the City (indicated by the fact that there are sparge and vapor extraction wells in the WWC5 record) to make sure the contamination is not drawn in by the pumping of the supply well. There may be other shallow contamination that the City should monitor that could affect the well. It would be good to grout all of the annular space in the new well down to the top of the gravel pack to prevent any contamination from very shallow ground water.

If the well to be added is to be screened in the Dakota aquifer, it would be desirable to obtain water samples from the observation wells to make sure that the water quality is acceptable or that

any constituents that are relatively high in concentration could be diluted sufficiently by blending with the water supply from the other City wells. The total dissolved solids concentration in the Dakota aquifer in the proposed location should be acceptable for water-supply use, although it could be higher at greater depths (higher sodium and chloride with depth). There is a possibility that the fluoride content could be somewhat greater than 2 mg/L in the Dakota ground waters in this area. It is desirable to grout the annular space in a Dakota well completely through the unconsolidated deposits and the upper Cretaceous shales and limestones overlying the Dakota aquifer to prevent possible contamination from shallow ground water.

In general, any short-term adverse impacts during construction should be offset by the long-term benefits of the improvements to the water-supply system of the City.

Recommended Action:

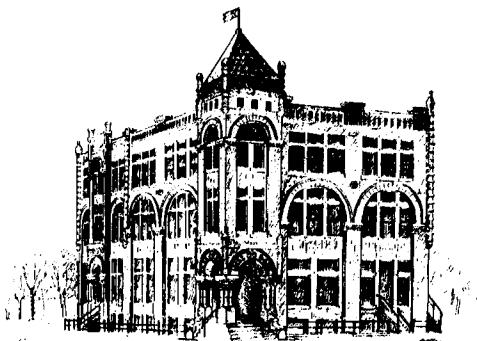
- ☒ Clearance of project should be granted
- ☐ Clearance of project should not be granted
- ☐ Clearance of project should be delayed until the issues or questions have been clarified
- ☐ Clearance of project should not be delayed, but the applicant (in the application) should address or clarify the questions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

Donald Whittemore
Reviewer's Name

Geohydrology Section, Kansas Geological Survey
Division/Agency

10/7/05
Date

Donald Whittemore
Reviewer's Signature



Ness County Bank Building

City of Ness City

208 West Main
P.O. Box 419
Ness City, Kansas 67560
Ph: 785-798-2229

Gary Gantz, Mayor

CITY COUNCIL
Myron Seib
Scott Barb
Ron Stoecklein
Joel Fitzgerald II
Stan Healzer

Carely Yaeger, City Clerk
Craig Crosswhite, City Attorney
Larry Benedict, City Judge

September 8, 2005

Kansas Geological Survey
University of Kansas
1930 Constant Ave., Campus West
Lawrence, KS 66047

RE: **CITY OF NESS CITY**
Addition to CDBG Project #05-PF-511 and KPWSLF Project No. 2416
Water System Improvements Project

Enclosed is a project narrative explaining an addition to our project.

We would appreciate your review of the addition to the project and any comments you may have, within 30 days. A project review form is enclosed for your use, as well as a self-addressed stamped envelope.

Please call Rick Stenzel with EBH & Associates (620-793-8411) or the City Office (785-798-2229) if you have any questions.

Respectfully,

Carely Yaeger
City Clerk, CMC

Enclosures



Evans - Bierly - Hutchison & Associates, P.A.

1105 Williams

Great Bend, Kansas 67530-4487

(620) 793-8411

FAX (620) 793-8413

ENGINEERS - SURVEYORS

**NESS CITY, KANSAS
ADDITION TO
CDBG Project # 05-PF-511
KPWSLF Project # 2416
WATER SYSTEM IMPROVEMENTS PROJECT**

August 26, 2005

PROJECT NARRATIVE:

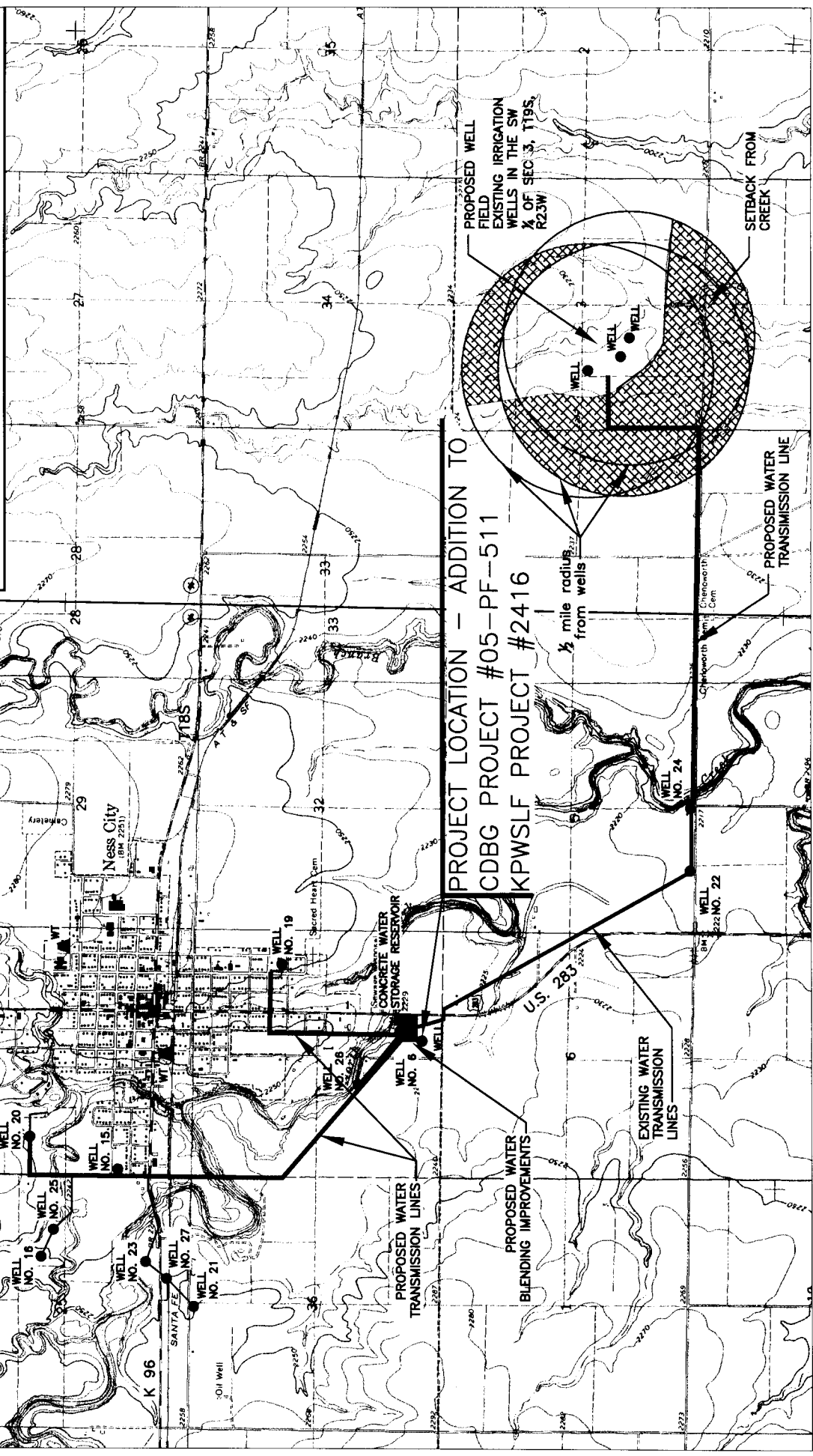
The purpose of the addition to the above referenced project is for an additional water supply source with *complimentary water quality* for blending with the City's water supply wells. One of the three water wells at the site in the original project will not be drilled. This addition is within the original project cost.

Additional items of work include but are not limited to drilling new municipal water well south of, and in close proximity to, the existing concrete water storage facility, electrical equipment, telemetry control, and installation of a water transmission line to the concrete water storage facility.

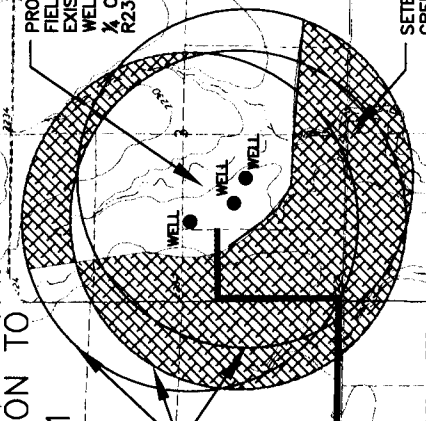
Rick Stenzel
EBH & Associates

ATTACHMENT C PROJECT LOCATION MAP WATER SYSTEM IMPROVEMENTS NESS CITY, KANSAS OCTOBER, 2004

- EXISTING WATER WELLS
 - ▲ WT
 - EXISTING ELEVATED WATER STORAGE
 - EXISTING UNDERGROUND WATER STORAGE
 - EXISTING WATER TRANSMISSION LINE
 - PROPOSED WATER TRANSMISSION LINE
- 1"=3000'
- E.B.H. ENGINEERS SURVYORS & ASSOCIATES**
1001 W. 12TH ST., SUITE 100
TOPEKA, KS 66604
TEL: 781-333-3333
FAX: 781-333-3334
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PROJECT LOCATION - ADDITION TO
CDBG PROJECT #05-PF-511
KPSLF PROJECT #2416



T18S

T19S