

File No. 49379	15. Formation Code: 211	Drainage Basin: NF Solomon	County: PL	Special Use:	Stream:																																																																																																			
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="10" style="text-align:left;">16. Points of Diversion</th> <th colspan="5" style="text-align:left;">17. Rate and Quantity</th> </tr> <tr> <td style="font-size:small;">T MOD DEL ENT</td> <td style="font-size:small;">PDIV</td> <td style="font-size:small;">Qualifier</td> <td style="font-size:small;">S</td> <td style="font-size:small;">T</td> <td style="font-size:small;">R</td> <td style="font-size:small;">ID</td> <td style="font-size:small;">'N</td> <td style="font-size:small;">'W</td> <td style="font-size:small;">Rate gpm</td> <td style="font-size:small;">Quantity mgy</td> <td style="font-size:small;">Rate gpm</td> <td style="font-size:small;">Quantity mgy</td> <td style="font-size:small;">Overlap PD Files</td> </tr> <tr> <td>NC</td> <td>63112</td> <td>SW SW NW</td> <td>30</td> <td>5S</td> <td>20W</td> <td>1</td> <td>2735</td> <td>4719</td> <td>800</td> <td>22.995</td> <td>550</td> <td>0</td> <td>43636</td> </tr> <tr> <td>NC</td> <td>64349</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>NC</td> <td>64350</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>NC</td> <td>64351</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>NC</td> <td>64352</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						16. Points of Diversion										17. Rate and Quantity					T MOD DEL ENT	PDIV	Qualifier	S	T	R	ID	'N	'W	Rate gpm	Quantity mgy	Rate gpm	Quantity mgy	Overlap PD Files	NC	63112	SW SW NW	30	5S	20W	1	2735	4719	800	22.995	550	0	43636	NC	64349													NC	64350													NC	64351													NC	64352												
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18. Storage: Rate _____ NF Quantity _____ ac/ft Additional Rate _____ NF Additional Quantity _____ ac/ft																																																																																																								
19. Limitation: 45.99 mgy af/yr at _____ gpm (_____ cfs) when combined with file number(s) 43636 & 43885																																																																																																								
Limitation: 62.68 mgy af/yr at _____ gpm (_____ cfs) when combined with file number(s) PL-007, 7867, 43636 & 43885																																																																																																								
20. Meter Required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No To be installed by 12/31/2017 Date Acceptable Meter Installed _____																																																																																																								
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Comments: also limited to 800 gpm when combined with 43636 Action Trail Comment: Reserved water right from land																																																																																																								

KANSAS DEPARTMENT OF AGRICULTURE
Division of Water Resources

M E M O R A N D U M

TO: Files

DATE: July 20, 2016

FROM: Kristen Baum

RE: Application, File No. 49,379
Water Right, File Nos. 43,636 & 43,885

The City of Logan has filed the referenced application to appropriate groundwater for municipal use. The existing point of diversion is a battery of four (4) wells located in the Northwest Quarter of Section 30, Township 5 South, Range 20 West, Phillips County, Kansas. The proposed appropriation is located within the North Fork Solomon River Basin and the source of supply will be the Ogallala Formation. An authorized agent has signed the application form affirming legal access to the point of diversion.

The City currently has two batteries of wells located south of town (Water Right, File Nos. 43,636 and 43,885) that were each authorized 22.395 mgd for municipal use. These wells are located on property owned by the States family. In exchange for access to the wells, the City agreed to supply water to the States family for domestic purposes and for stockwatering at a proposed dairy. In addition to the quantity of water authorized for municipal use, these batteries were each authorized 0.6 mgd for domestic use and 53.905 mgd for stockwatering use. The proposed dairy was never built and the perfection period for stockwatering expired in 2005, so no water was perfected for stockwatering. The perfection period for municipal use didn't expire until 2020, but after a review of the water use history for the files, it was determined that the quantity authorized for municipal use had already been fully perfected. Based upon this information, the City granted permission for the Certificates to be issued prior to the expiration of the perfection period. Since the water authorized for domestic use is distributed along the pipeline that sends water to the City (i.e. a common distribution system), it was decided that the 0.6 mgd authorized for domestic use should actually be considered municipal water as well. Ultimately, Certificates for File Nos. 43,636 and 43,885 were issued each authorizing 22.995 mgd (22.395 + 0.6) with a limitation of 62.68 mgd when combined with the City's senior alluvial files, Vested Right, File No. PL-007 and Water Right File No. 7,867.

The purpose of this new application (File No. 49,379) is to provide for a complete overlap in place of use and point of diversion with Water Right, File No. 43,636 in order to get more water authorized from the better producing east battery – no new water is being requested. The City's senior alluvial files (Vested Right, File No. PL-007 and Water Right File No. 7,867) are authorized a combined total of 62.68 mgd. The two junior files sourcing the Ogallala aquifer (Water Right, File Nos. 43,636 and 43,885) are authorized a combined total of 45.99 mgd (limited to 62.68 mgd when combined with the alluvial files) because this was the maximum quantity the City could reasonably justify when the junior files were approved. The applicant originally requested the entire 62.68 mgd, but the application has since been modified so that no new *Ogallala* water would be authorized.

Application, File No. 49,379 now requests 22.995 mgd limited to 45.99 mgd when combined with Water Right, File Nos. 43,636 and 43,885 and limited to 62.68 mgd when combined with Vested Right, File No. PL-007 and Water Right, File Nos. 7,867; 43,636 and 43,885. The requested rate of diversion will be limited to 800 gpm when combined with Water Right File No. 43,636. The place of use includes the City of Logan and immediate vicinity, as well as various tracts of land located along the pipeline as specified in an agreement between the City and the States family (see attached map).

This point of diversion is located outside the area designated in the Guidance Document regarding applications impacting Kansas compliance with the Republican River Compact (RRC). Thus, it can be further processed subject to safe yield as described in K.A.R. 5-3-11, which states in part, that the North Fork Solomon River, its tributaries and their alluviums, and any other aquifer that has a substantial hydraulic connection to an alluvium, have been determined to be fully appropriated based on safe yield criteria, and shall be closed to further new groundwater appropriations. The Division of Water Resources uses the RRC groundwater model to determine whether a substantial hydraulic connection exists. Using the requested quantity of water and specific point of diversion, the model determines the potential impact to streamflow, and the value selected by the Chief Engineer to represent a substantial hydraulic connection is an average annual impact greater than 10 acre-feet. Based on the model run, this application would have no potential impact and can be further processed. Furthermore, the closest alluvium appears to be at least 2 miles away.

The proposed point of diversion must also comply with K.A.R. 5-3-11 safe yield evaluation based on the area of consideration (extent of unconfined aquifer) within a 2-mile circle, calculated recharge quantity, and the extent of recharge available in that basin. Using an 8,042 acre area of consideration (the entire 2-mile circle) and a potential recharge of 1.27 inches with 75% available for appropriation, safe yield was determined to be 638.33 acre-feet. A total of 227.14 acre-feet of water has already been appropriated within the area of consideration, providing a difference of 411.19 acre-feet available for appropriation. Thus there is a sufficient quantity of water available for appropriation, and the application meets all safe yield criteria.

All wells identified by the applicant within one-half mile of the point of diversion are controlled by the City of Logan, so no notification letters were sent. The nearest domestic well appears to be approximately 3,000 feet to the southeast. The nearest non-domestic well is the other battery of wells controlled by the City of Logan (File No. 43,885) approximately 1,700 feet to the northwest. Thus, the proposed point of diversion meets minimum well spacing criteria to all existing wells per the requirements in K.A.R. 5-4-4.

As allowed by K.S.A. 82a-706(c) an approved water flow meter shall be installed on the diversion works for this file. If any chemical or foreign substance is injected into the water pumped under this permit, a check valve will need to be installed. Water level measurement tubes will also be required because this is a new well exceeding 100 gpm.

Kelly Stewart, Water Commissioner for the Stockton Field Office, recommended approval of the referenced application in an e-mail. Well spacing and safe yield criteria are met, and approval of the application will not impair senior-water rights nor prejudicially or unreasonably affect the public interest. Based on the above discussion, it is recommended that the referenced application be approved.



Kristen A. Baum
Environmental Scientist
Permits Unit

1320 Research Park Drive
Manhattan, Kansas 66502
(785) 564-6700



900 SW Jackson, Room 456
Topeka, Kansas 66612
(785) 296-3556

Jackie McClaskey, Secretary

Governor Sam Brownback

CITY OF LOGAN
CITY CLERK'S OFFICE
PO BOX 116
LOGAN KS 67646

FILE COPY

Re: Appropriation of Water, File No. 49,379

Dear Sir or Madam:

There is enclosed a permit to appropriate water authorizing you to proceed with construction of the proposed diversion works (except those dams and stream obstructions regulated by K.S.A. 82a-301 through 305a), to divert such unappropriated water as may be available from the source and at the location specified in the permit, and to use it for the purpose and at the location described in the permit.

Your attention is directed to the enclosures and to the terms, conditions, and limitations specified in this permit. A water meter is required and you must install it prior to water being put to beneficial use in order for you to maintain accurate records of water use. The meter should be used to provide the information required on the annual water use report.

Failure to notify the Chief Engineer of the Division of Water Resources of the completion of the diversion works within the time allowed, or within any authorized extension of time thereof, will result in the dismissal of this permit. Enclosed is a form which may be used to notify the Chief Engineer that the proposed diversion works have been completed.

All requests for extensions of time to complete diversion works, or to perfect appropriations, must be submitted to the Chief Engineer before the expiration of time originally set forth in the permit to complete diversion works or to perfect an appropriation. If for any reason, you require an extension of time, you must request it before the expiration of time set forth in this permit. Failure to comply with this regulation will result in the dismissal of your permit or your water right. Any request for an extension of time shall be accompanied by the required statutory fee, which is currently \$100.00.

There is also enclosed an information sheet setting forth the procedure to obtain a Certificate of Appropriation which will establish the extent of your water right. If you have any questions, please contact our office. If you wish to discuss this specific file, please have the file number ready so that we may help you more efficiently.

Sincerely,

Brent A. Turney, P.G.
Change Application Unit Supervisor
Water Appropriation Program

BAT:kab
Enclosures
pc: Stockton Field Office
Gary L & Cathy States

THE STATE OF KANSAS



KANSAS DEPARTMENT OF AGRICULTURE
Jackie McClaskey, Secretary of Agriculture

DIVISION OF WATER RESOURCES
David W. Barfield, Chief Engineer

**APPROVAL OF APPLICATION
and
PERMIT TO PROCEED**

(This Is Not a Certificate of Appropriation)

FILE COPY

This is to certify that I have examined Application, **File No. 49,379** of the applicant

**CITY OF LOGAN
CITY CLERK'S OFFICE
PO BOX 116
LOGAN KS 67646**

for a permit to appropriate water for beneficial use, together with the maps, plans and other submitted data, and that the application is hereby approved and the applicant is hereby authorized, subject to vested rights and prior appropriations, to proceed with the construction of the proposed diversion works (except those dams and stream obstructions regulated by K.S.A. 82a-301 through 305a, as amended), and to proceed with all steps necessary for the application of the water to the approved and proposed beneficial use and otherwise perfect the proposed appropriation subject to the following terms, conditions and limitations:

1. That the priority date assigned to such application is **April 30, 2015**.
2. That the water sought to be appropriated shall be used for municipal within the City of Logan, Kansas and immediate vicinity, and at the following locations:

the Northwest Quarter of the Southeast Quarter of the Southwest Quarter (NW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$) of Section 33, Township 4 South, Range 20 West;

the Northwest Quarter of the Northeast Quarter (NW $\frac{1}{4}$ NE $\frac{1}{4}$), the North Half of the Northwest Quarter (N $\frac{1}{2}$ NW $\frac{1}{4}$), and the Southwest Quarter of the Northwest Quarter (SW $\frac{1}{4}$ NW $\frac{1}{4}$) of Section 4;

the East Half of the Northeast Quarter (E $\frac{1}{2}$ NE $\frac{1}{4}$) of Section 5;

the Southwest Quarter of the Northeast Quarter (SW $\frac{1}{4}$ NE $\frac{1}{4}$), the South Half of the Northwest Quarter (S $\frac{1}{2}$ NW $\frac{1}{4}$), the West Half of the Southwest Quarter (W $\frac{1}{2}$ SW $\frac{1}{4}$), the South Half of the Southeast Quarter of the Southwest Quarter (S $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$), the South Half of the Southwest Quarter of the Southeast Quarter (S $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$) of Section 7;

the Northeast Quarter (NE $\frac{1}{4}$), and the East Half of the Northwest Quarter (E $\frac{1}{2}$ NW $\frac{1}{4}$) of Section 18;

the Southwest Quarter of the Southwest Quarter (SW $\frac{1}{4}$ SW $\frac{1}{4}$) of Section 19;

the West Half of the East Half of the Northeast Quarter (W $\frac{1}{2}$ E $\frac{1}{2}$ NE $\frac{1}{4}$), the West Half of the Northeast Quarter (W $\frac{1}{2}$ NE $\frac{1}{4}$), the West Half (W $\frac{1}{2}$), and the West Half of the Southeast Quarter (W $\frac{1}{2}$ SE $\frac{1}{4}$) of Section 30,

all in Township 5 South, Range 20 West, Phillips County, Kansas; and,

the East Half of the Northeast Quarter (E $\frac{1}{2}$ NE $\frac{1}{4}$) of Section 25, Township 5 South, Range 21 West, Norton County, Kansas.

3. That the authorized source from which the appropriation shall be made is groundwater, to be withdrawn by means of a battery of four (4) wells with a geographical center located in the Southwest Quarter of the Southwest Quarter of the Northwest Quarter (SW¼ SW¼ NW¼) of Section 30, more particularly described as being near a point 2,735 feet North and 4,719 feet West of the Southeast corner of said section, in Township 5 South, Range 20 West, Phillips County, Kansas located substantially as shown on the topographic map accompanying the application.

4. That the appropriation sought shall be limited to a maximum diversion rate not in excess of **800 gallons per minute (1.78 c.f.s.)** and to a quantity not to exceed **22.995 million gallons** of water for any calendar year.

5. That installation of works for diversion of water shall be completed on or before **December 31, 2017** or within any authorized extension thereof. The applicant shall notify the Chief Engineer and pay the statutorily required field inspection fee of \$400.00 when construction of the works has been completed. Failure to timely submit the notice and the fee will result in revocation of the permit. Any request for an extension of time shall be submitted prior to the expiration of the deadline and shall be accompanied by the required statutory fee of \$100.00.

6. That the proposed appropriation shall be perfected by the actual application of water to the proposed beneficial use on or before **December 31, 2021** or any authorized extension thereof. Any request for an extension of time shall be submitted prior to the expiration of the deadline and shall be accompanied by the required statutory fee of \$100.00.

7. That the applicant shall not be deemed to have acquired a water appropriation for a quantity in excess of the amount approved herein nor in excess of the amount found by the Chief Engineer to have been actually used for the approved purpose during one calendar year subsequent to approval of the application and within the time specified for perfection or any authorized extension thereof.

8. That the use of water herein authorized shall not be made so as to impair any use under existing water rights nor prejudicially and unreasonably affect the public interest.

9. That the right of the appropriator shall relate to a specific quantity of water and such right must allow for a reasonable raising or lowering of the static water level and for the reasonable increase or decrease of the streamflow at the appropriator's point of diversion.

10. That this permit does not constitute authority under K.S.A. 82a-301 through 305a to construct any dam or other obstruction; nor does it grant any right-of-way, or authorize entry upon or injury to, public or private property.

11. That all diversion works constructed under the authority of this permit into which any type of chemical or other foreign substance will be injected into the water pumped from the diversion works shall be equipped with an in-line, automatic quick-closing, check valve capable of preventing pollution of the source of the water supply. The type of valve installed shall meet specifications adopted by the Chief Engineer and shall be maintained in an operating condition satisfactory to the Chief Engineer.

12. That all wells with a diversion rate of 100 gallons per minute or more drilled under the authority of this permit shall have a tube or other device installed in a manner acceptable to, and in accordance with specifications adopted by, the Chief Engineer. This tube or device shall be suitable for making water level measurements and shall be maintained in a condition satisfactory to the Chief Engineer.

13. That an acceptable water flow meter shall be installed and maintained on the diversion works authorized by this permit in accordance with the Kansas Administrative Regulations 5-1-4 through 5-1-12 adopted by the Chief Engineer. This water flow meter shall be used to provide an accurate quantity

of water diverted as required for the annual water use report (including the meter reading at the beginning and end of the report year).

14. That the applicant shall maintain accurate and complete records from which the quantity of water diverted during each calendar year may be readily determined and the applicant shall file an annual water use report with the Chief Engineer by March 1 following the end of each calendar year. Failure to file the annual water use report by the due date shall cause the applicant to be subject to a civil penalty.

15. That no water user shall engage in nor allow the waste of any water diverted under the authority of this permit.

16. That failure without cause to comply with provisions of the permit and its terms, conditions and limitations will result in the forfeiture of the priority date, revocation of the permit and dismissal of the application.

17. That the right to appropriate water under authority of this permit is subject to any minimum desirable streamflow requirements identified and established pursuant to K.S.A. 82a-703c for the source of supply to which this water right applies.

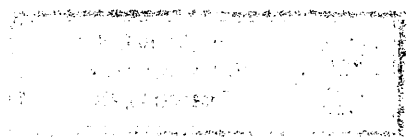
18. That this permit is further limited such that all four (4) wells shall be located within a three hundred (300) foot radius circle, in the same local source of supply and be limited to a total maximum diversion rate not in excess of 800 gallons per minute (1.78 c.f.s.).

19. That the quantity of water approved under this permit is further limited to the quantity which combined with Water Right, File Nos. 43,636 and 43,885, will provide a total **not to exceed 45.99 million gallons** of water per calendar year, for municipal use as described herein.

20. That the quantity of water approved under this permit is further limited to the quantity which combined with Vested Right, File No. PL-007 and Water Right, File Nos. 7,867; 43,636 and 43,885, will provide a total **not to exceed 62.68 million gallons** of water per calendar year, for municipal use as described herein.

21. That the rate of diversion of water approved under this permit is further limited to the rate which combined with Water Right, File No. 43,636, will provide a total **not to exceed 800 gallons per minute** (1.78 c.f.s.) from the authorized point of diversion.

22. That the permit holder shall submit a progress report to the office of the Chief Engineer by March 1, following the tenth full calendar year after the permit was issued. The progress report must be submitted on a form prescribed by the Chief Engineer, and shall compare annual water use projected in the original application with the actual annual water use for the prior 10 years. The progress report must document compliance with the approved conservation plan, contain sufficient details to determine the extent of perfection of the water right during the previous ten years, and demonstrate how the water right, in association with other water rights, meets the municipal use need.



FILE COPY

CERTIFICATE OF SERVICE

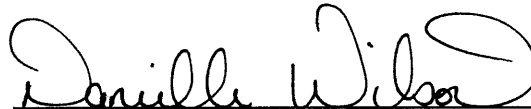
On this 2nd day of August, 2016, I hereby certify that the foregoing Approval of Application and Permit to Proceed, File No. 49,379, dated July 29, 2016 was mailed postage prepaid, first class, US mail to the following:

CITY OF LOGAN
CITY CLERK'S OFFICE
PO BOX 116
LOGAN KS 67646

With photocopies to:

Stockton Field Office

GARY L & CATHY STATES
1329 W YANKEE LN
LOGAN KS 67646-9726



Division of Water Resources

THE STATE OF KANSAS



KANSAS DEPARTMENT OF AGRICULTURE
Secretary of Agriculture
JACKIE McCLASKEY,

DIVISION OF WATER RESOURCES
David W. Barfield, Chief Engineer

File Number 49,379

This item to be completed by the Division of Water Resources.

WATER RESOURCES
RECEIVED

APR 30 2015

1:36 pm
KS DEPT OF AGRICULTURE

APPLICATION COMPLETE
7/20/16
Reviewer: KAB

APPLICATION FOR PERMIT TO
APPROPRIATE WATER FOR BENEFICIAL USE

Filing Fee Must Accompany the Application
(Please refer to Fee Schedule attached to this application form.)

To the Chief Engineer of the Division of Water Resources, Kansas Department of Agriculture,
109 SW 9th Street, Second Floor, Topeka, KS 66612-1283:

1. Name of Applicant (Please Print): CITY OF LOGAN
Address: PO Box 116
City: LOGAN State KANSAS Zip Code 67646-0116
Telephone Number: (785) 689-4865

2. The source of water is: surface water in - NA -
(stream)
OR groundwater in NORTH FORK SOLDMON RIVER DRAINAGE BASIN
(drainage basin)

Certain streams in Kansas have minimum target flows established by law or may be subject to administration when water is released from storage for use by water assurance district members. If your application is subject to these regulations on the date we receive your application, you will be sent the appropriate form to complete and return to the Division of Water Resources.

3. The maximum quantity of water desired is 22.995 million gallons * acre-feet OR 62.680 MILLION gallons per calendar year,
to be diverted at a maximum rate of 800 gallons per minute OR _____ cubic feet per second.

LIMITED TO 62.680 M.G.Y. w/ COMBINED w/ FILE NOS. PL 007; 7,867; 43,636 & 43,885, AND 800 G.P.M. w/ COMBINED w/ FILE NO. 43,636.
Once your application has been assigned a priority, the requested maximum rate of diversion and maximum requested quantity of water under that priority number can NOT be increased. Please be certain your requested maximum rate of diversion and maximum quantity of water are appropriate and reasonable for your proposed project and are in agreement with the Division of Water Resources' requirements.

4. The water is intended to be appropriated for (Check use intended):
(a) Artificial Recharge (b) Irrigation (c) Recreational (d) Water Power
(e) Industrial (f) Municipal (g) Stockwatering (h) Sediment Control
(i) Domestic (j) Dewatering (k) Hydraulic Dredging (l) Fire Protection
(m) Thermal Exchange (n) Contamination Remediation

YOU **MUST** COMPLETE AND ATTACH ADDITIONAL DIVISION OF WATER RESOURCES FORM(S) PROVIDING INFORMATION TO SUBSTANTIATE YOUR REQUEST FOR THE AMOUNT OF WATER FOR THE INTENDED USE REFERENCED ABOVE.

and 45.99 mgd combined w/ 43,636 and 43,885. *
* KAB/DWR 7-20-16

For Office Use Only:
F.O. 3 GMD Meets K.A.R. 5-3-1 (YES/NO) Use MUN Source S County PL By KAB Date 4-30-15
Code REG Fee \$ 300 TR # 621152 Receipt Date 4-23-15 Check # 5982

5. The location of the proposed wells is (same as wells under File No, 43,636):
- (A) A battery of 4 wells with a geographic center located in the Southwest Quarter of the Southwest Quarter of the Northwest Quarter (SW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$) of Section 30, more particularly described as being 2,735 feet North and 4,719 feet West of the Southeast corner of said section, in Township 5 South, Range 20 West, Phillips County, Kansas (identified by the city as the East Wellfield) [ID 1 / PDIV 63112].
- (1) One well located in the Northwest Quarter of the Northwest Quarter of the Southwest Quarter (NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$) of Section 30, more particularly described as being 2,443 feet North and 4,756 feet West of the Southeast corner of said section, in Township 5 South, Range 20 West, Phillips County, Kansas (identified by the city as Well No. 9) [ID 3 / PDIV 64349],
- (2) One well located in the Southwest Quarter of the Southwest Quarter of the Northwest Quarter (SW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$) of Section 30, more particularly described as being 2,647 feet North and 4,730 feet West of the Southeast corner of said section, in Township 5 South, Range 20 West, Phillips County, Kansas (identified by the city as Well No. 10) [ID 4 / PDIV 64350],
- (3) One well located in the Southwest Quarter of the Southwest Quarter of the Northwest Quarter (SW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$) of Section 30, more particularly described as being 2,829 feet North and 4,708 feet West of the Southeast corner of said section, in Township 5 South, Range 20 West, Phillips County, Kansas (identified by the city as Well No. 11) [ID 5 / PDIV 64351], and
- (4) One well located in the Southwest Quarter of the Southwest Quarter of the Northwest Quarter (SW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$) of Section 30, more particularly described as being 3,022 feet North and 4,682 feet West of the Southeast corner of said section, in Township 5 South, Range 20 West, Phillips County, Kansas (identified by the city as Well No. 12) [ID 6 / PDIV 64352].

WATER RESOURCES
RECEIVED

APR 30 2015

KS DEPT OF AGRICULTURE

SCANNED

5.
SEE ATTACHED

The location of the proposed wells, pump sites or other works for diversion of water is:

Note: For the application to be accepted, the point of diversion location must be described to at least a 10 acre tract, unless you specifically request a 60 day period of time in which to locate the site within a specifically described, minimal legal quarter section of land.

- (A) One in the ____ quarter of the ____ quarter of the ____ quarter of Section _____, more particularly described as being near a point ____ feet North and ____ feet West of the Southeast corner of said section, in Township ____ South, Range ____ East/West (circle one), _____ County, Kansas.
- (B) One in the ____ quarter of the ____ quarter of the ____ quarter of Section _____, more particularly described as being near a point ____ feet North and ____ feet West of the Southeast corner of said section, in Township ____ South, Range ____ East/West (circle one), _____ County, Kansas.
- (C) One in the ____ quarter of the ____ quarter of the ____ quarter of Section _____, more particularly described as being near a point ____ feet North and ____ feet West of the Southeast corner of said section, in Township ____ South, Range ____ East/West (circle one), _____ County, Kansas.
- (D) One in the ____ quarter of the ____ quarter of the ____ quarter of Section _____, more particularly described as being near a point ____ feet North and ____ feet West of the Southeast corner of said section, in Township ____ South, Range ____ East/West (circle one), _____ County, Kansas.

If the source of supply is groundwater, a separate application shall be filed for each proposed well or battery of wells, except that a single application may include up to four wells within a circle with a quarter (1/4) mile radius in the same local source of supply which do not exceed a maximum diversion rate of 20 gallons per minute per well.

A battery of wells is defined as two or more wells connected to a common pump by a manifold; or not more than four wells in the same local source of supply within a 300 foot radius circle which are being operated by pumps not to exceed a total maximum diversion rate of 800 gallons per minute and which supply water to a common distribution system.

6. The owner of the point of diversion, if other than the applicant is (please print):

- NA -
(name, address and telephone number)

- NA -
(name, address and telephone number)

You must provide evidence of legal access to, or control of, the point of diversion from the landowner or the landowner's authorized representative. Provide a copy of a recorded deed, lease, easement or other document with this application. In lieu thereof, you may sign the following sworn statement:

I have legal access to, or control of, the point of diversion described in this application from the landowner or the landowner's authorized representative. I declare under penalty of perjury that the foregoing is true and correct.

Executed on 4-23-, 2015. Max Lowry
Applicant's Signature

7. The proposed project for diversion of water will consist of A BATTERY OF FOUR (4) WELLS
(number of wells, pumps or dams, etc.)

and (was) ~~(will be)~~ completed ~~(by)~~ MAY 1-10, 2001.
(Month/Day/Year - each was or will be completed)

8. The first actual application of water for the proposed beneficial use was or is estimated to be ASAP.
(Mo/Day/Year)

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- 9. Will pesticide, fertilizer, or other foreign substance be injected into the water pumped from the diversion works?
 Yes No If "yes", a check valve shall be required.

All chemigation safety requirements must be met including a chemigation permit and reporting requirements.

- 10. If you are planning to impound water, please contact the Division of Water Resources for assistance, prior to submitting the application. Please attach a reservoir area capacity table and inform us of the total acres of surface drainage area above the reservoir.

Have you also made an application for a permit for construction of this dam and reservoir with the Division of Water Resources? Yes No

• If yes, show the Water Structures permit number here -NA-

• If no, explain here why a Water Structures permit is not required THIS IS AN APPLICATION FOR A GROUNDWATER WATER RIGHT.

- 11. The application must be supplemented by a U.S.G.S. topographic map, aerial photograph or a detailed plat showing the following information. On the topographic map, aerial photograph, or plat, identify the center of the section, the section lines or the section corners and show the appropriate section, township and range numbers. Also, please show the following information:

- (a) The location of the proposed point(s) of diversion (wells, stream-bank installations, dams, or other diversion works) should be plotted as described in Paragraph No. 5 of the application, showing the North-South distance and the East-West distance from a section line or southeast corner of section.
- (b) If the application is for groundwater, please show the location of any existing water wells of any kind within 1/2 mile of the proposed well or wells. Identify each existing well as to its use and furnish the name and mailing address of the property owner or owners. If there are no wells within 1/2 mile, please advise us.
- (c) If the application is for surface water, the names and addresses of the landowner(s) 1/2 mile downstream and 1/2 mile upstream from your property lines must be shown.
- (d) The location of the proposed place of use should be shown by crosshatching on the topographic map, aerial photograph or plat.
- (e) Show the location of the pipelines, canals, reservoirs or other facilities for conveying water from the point of diversion to the place of use.

A 7.5 minute U.S.G.S. topographic map may be obtained by providing the section, township and range numbers to: Kansas Geological Survey, 1930 Constant, Campus West, University of Kansas, Lawrence, Kansas 66047.

- 12. List any application, appropriation of water, water right, or vested right file number that covers the same diversion points or any of the same place of use described in this application. Also list any other recent modifications made to existing permits or water rights in conjunction with the filing of this application.

PLACE OF USE : PL 007; 7,867; 43,636 + 43,885.

POINT OF DIVERSION : 43,636.

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13. Furnish the following well information if the proposed appropriation is for the use of groundwater. If the well has not been completed, give information obtained from test holes, if available.

Information below is from:	<input type="checkbox"/> Test holes		<input checked="" type="checkbox"/> Well as completed		<input checked="" type="checkbox"/> Drillers log attached	
	EAST-1 (A)	EAST-2 (B)	EAST-3 (C)	EAST-4 (D)		
Well location as shown in paragraph No.						
Date Drilled	<u>5/1/2001</u>	<u>5/2/2001</u>	<u>5/9/2001</u>	<u>5/10/2001</u>		
Total depth of well	<u>161'</u>	<u>163'</u>	<u>163'</u>	<u>158'</u>		
Depth to water bearing formation						
Depth to static water level	<u>118'</u>	<u>114'</u>	<u>115'</u>	<u>113'</u>		
Depth to bottom of pump intake pipe						

14. The relationship of the applicant to the proposed place where the water will be used is that of OWNER
(owner, tenant, agent or otherwise)

15. The owner(s) of the property where the water is used, if other than the applicant, is (please print):
- NA -
(name, address and telephone number)

- NA -
(name, address and telephone number)

16. The undersigned states that the information set forth above is true to the best of his/her knowledge and that this application is submitted in good faith.

Dated at Rogan, Kansas, this 23rd day of April, 2015
(month) (year)

Mark Lowmy
(Applicant Signature)

APPLICANT(S) SOCIAL SECURITY IDENTIFICATION NUMBER(S)

By _____
(Agent or Officer Signature)

and/or APPLICANT(S) TAXPAYER I.D. NO(S)

(Agent or Officer - Please Print)

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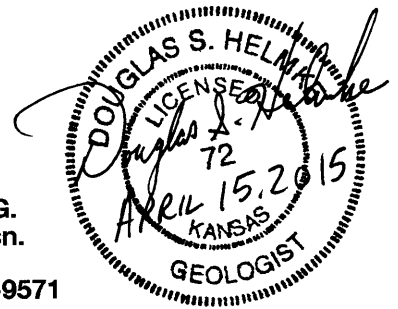
Assisted by _____
(office/title)

Date: _____

SCANNED

Please send a copy of all correspondence, including application acknowledgment letter, to:

Douglas S. Helmke, L. G.
Kansas Rural Water Assn.
6847 SE 29th Street
Tecumseh, Kansas 66542-9571



(Date)

Kansas Department of Agriculture
Division of Water Resources
David W. Barfield, Chief Engineer
109 SW 9th Street, 2nd Floor
Topeka, Kansas 66612-1283

Re: Application
File No. 49,379

Minimum Desirable Streamflow

Dear Sir:

I understand that a Minimum Desirable Streamflow requirement has been established by the legislature for the source of supply to which the above referenced application applies.

I understand that diversion of water pursuant to this application will be subject to regulation any time Minimum Desirable Streamflow requirements are not being met.

I also understand that if this application is approved, there could be times, as determined by the Division of Water Resources, when I would not be allowed to divert water. I realize that this could affect the economics of my decision to appropriate water.

I am aware of the above factors, and with the knowledge thereof, request that the Division of Water Resources proceed with processing and approval, if possible, of the above referenced application.

Max Lowry
Signature of Applicant

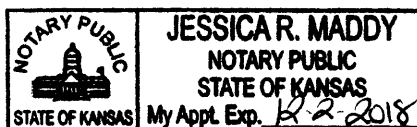
State of Kansas)
County of Phillips) ss

Max Lowry
(Print Applicant's Name)

I hereby certify that the foregoing instrument was signed in my presence and sworn to before me this 23rd day of April, 2015.

Jessica R. Maddy
Notary Public

My Commission Expires: 12-2-2018



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SCANNED

**MINIMUM DESIRABLE STREAMFLOW FORM TO BE USED WHEN
APPLICABLE WHEN FILING AN APPLICATION FOR PERMIT
TO APPROPRIATE WATER FOR BENEFICIAL USE**

The Kansas Legislature has established minimum desirable streamflows for the streams listed below. If your proposed diversion of water is going to be from one of these watercourses or adjacent alluvial aquifers, please complete the back side of this page and submit it along with your application for permit to appropriate water.

Arkansas River
Big Blue River
Chapman Creek
Chikaskia River
Cottonwood River
Delaware River
Little Arkansas River
Little Blue River
Marais des Cygnes River
Medicine Lodge River
Mill Creek (Wabaunsee Co. area)
Neosho River

Ninnescah River
North Fork Ninnescah River
Rattlesnake Creek
Republican River
Saline River
Smoky Hill River
Solomon River
South Fork Ninnescah
Spring River
Walnut River
Whitewater River

Applicant's Name CITY OF LOGAN
(Please Print)

MUNICIPAL (PUBLIC WATER SUPPLY) APPLICATION
SUPPLEMENTAL INFORMATION SHEET

Application File Number
49,379
(assigned by DWR)

SECTION 1: PRESENT WATER USE SUMMARY (IF NO PREVIOUS MUNICIPAL WATER USE HAS BEEN UTILIZED, PROCEED TO SECTION 3)
NOTE: WORKSHEET FOR WATER PUMPED, PURCHASED, AND SOLD BY YOUR WATER DISTRIBUTION SYSTEM.

2014	Column 1 Raw Water Diverted Under Your Rights	Column 2 Water Purchased From All Sources	Column 3 Water Sold to Other Public Water Suppliers	Column 4 Water Sold to Your Industrial, Stock, and Bulk Customers	Column 5 Water Sold to Your Residential and Commercial Customers	Column 6 Other Metered Water	Column 7 Remaining Water Used (See Below Explanation)
	25.284	0	0	0	25.022	0.262	0.000
	TOTAL WATER = Columns 1 + 2		ACCOUNTED FOR WATER = Columns 3 + 4 + 5 + 6			UNACCOUNTED FOR WATER	

UNACCOUNTED FOR WATER = TOTAL WATER - ACCOUNTED FOR WATER

- Column 1: The amount of raw water diverted from all of your points of diversion.
- Column 2: The amount of water purchased wholesale from all other public water supply systems or the Kansas Water Office.
- Column 3: The amount of water sold wholesale to all other public water supply systems.
- Column 4: The amount of water sold retail to all industrial, pasture, stockwater, feedlot, and bulk water service connections. Include the amount of water sold to all farmsteads using at least 200,000 gallons of water per year.
- Column 5: The amount of water sold retail to your residential and commercial customers and to industries and farmsteads using less than 200,000 gallons of water per year.
- Column 6: The amount of water used that is metered at individual service connections and supplied free, such as for public service, treatment processes, and connections receiving free water.
- Column 7: The amount of remaining water used. The gallons reported in this column are found by adding the numbers in Columns 1 and 2 and subtracting the numbers in Columns 3, 4, 5, and 6.

UNACCOUNTED FOR WATER

Use the following to calculate your distribution system's Unaccounted For Water:

Start with the amount in Column 1 and add the amount in Column 2, then subtract the amounts in Columns 3, 4, 5, and 6 leaving an amount of water representing your unaccounted for water to enter in Column 7.

Use the following to calculate the percent Unaccounted For Water versus the Total Water of your system:

$$\text{Percent Unaccounted For Water} = \frac{\text{Unaccounted For Water}}{\text{Total Water (Columns 1,2)}} \times 100$$

If this number exceeds 20%, please explain the large amount of unaccounted for water and describe any steps being taken to reduce it.

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 KS DEPT OF AGRICULTURE

SECTION 2: PAST WATER USE
COMPLETE THE FOLLOWING TABLE FROM YOUR PAST WATER USE RECORDS.

	Column 1 Raw Water Diverted Under Your Rights	Column 2 Water Purchased From All Sources	Column 3 Water Sold to Other Public Water Suppliers	Column 4 Water Sold to Your Industrial, Stock, and Bulk Customers	Column 5 Water Sold to Your Residential and Commercial Customers	Column 6 Other Metered Water	Column 7 Remaining Water Used (See Above Explanation)
20 years ago 1995	41.098	0	0	0	37.244	0.398	3.456
15 years ago 2000	47.770	0	0	0	42.890	0.775	4.105
10 years ago 2005	42.481	0	0	0	40.691	0.818	0.972
5 years ago 2010	36.621	0	0	0	27.349	1.005	8.267
	TOTAL WATER = Columns 1 + 2		ACCOUNTED FOR WATER = Columns 3 + 4 + 5 + 6			UNACCOUNTED FOR WATER	

SECTION 3: PROJECTED FUTURE WATER NEEDS

PLEASE COMPLETE THE FOLLOWING TABLE SHOWING YOUR FUTURE WATER REQUIREMENTS FOR THE NEXT 20 YEARS:

	Column 1 Raw Water Diverted Under Your Rights	Column 2 Water Purchased From All Sources	Column 3 Water Sold to Other Public Water Suppliers	Column 4 Water Sold to Your Industrial, Stock, and Bulk Customers	Column 5 Water Sold to Your Residential and Commercial Customers	Column 6 Other Metered Water	Column 7 Remaining Water Used (See Explanation on other side)
Year 5 2020	50.000	0	0	0	41.800	2.000	6.200
Year 10 2025	62.680	0	0	0	54.480	2.000	6.200
Year 15 2030	62.680	0	0	0	54.480	2.000	6.200
Year 20 2035	62.680	0	0	0	54.480	2.000	6.200
TOTAL WATER = Columns 1 + 2			ACCOUNTED FOR WATER = Columns 3 + 4 + 5 + 6				UNACCOUNTED FOR WATER

SECTION 4: POPULATION AND SERVICE CONNECTIONS

ESTIMATE THE NUMBER OF PERSONS DIRECTLY SERVED BY YOUR WATER DISTRIBUTION SYSTEM

PAST POPULATION - PROVIDE INFORMATION BELOW:
(CENSUS BUREAU INFORMATION)

LAST 20 YEARS	POPULATION
20 years ago 1995	584
15 years ago 2000	603
10 years ago 2005	544
5 years ago 2010	589
Last Year 2014	600

PROJECTED FUTURE POPULATION

ESTIMATE FUTURE POPULATION AND SUBSTANTIATE NUMBERS ON SEPARATE ATTACHMENTS

NEXT 20 YEARS	POPULATION
Year 5 2020	600
Year 10 2025	600
Year 15 2030	600
Year 20 2035	600

WATER RESOURCES RECEIVED APR 30 2015

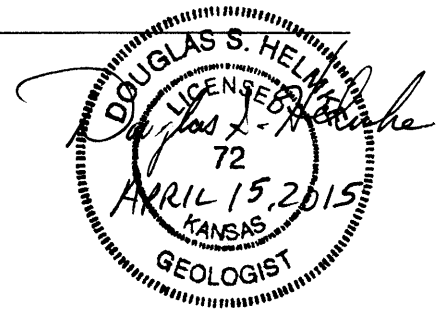
Provide number of current active service connections:

280 Residential 0 Industrial 0 Other (specify) _____
35 Commercial 0 Pasture/ Stockwater/ Feedlot 315 Total

SECTION 5: PRESENT GALLONS PER PERSON PER DAY
CALCULATE YOUR GALLONS PER PERSON PER DAY

Water in Columns 5, 6, and 7 + Population + 365 Days/Year = Gallons per Person per Day

$\frac{25.284}{\text{Amount of water in Columns 5, 6, and 7 of Section 1}} + \frac{600}{\text{Population from Last Year of Section 4}} \div 365 \text{ Days/Year} = 115.5 \text{ GALLONS PER PERSON PER DAY.}$



SECTION 6: AREA TO BE SERVED

Describe the area to be served or provide the legal description of the location where the water is to be used including any other city of water supply system (i.e. Rural Water District): MUNICIPAL USE
WITHIN THE CITY OF LOGAN AND IMMEDIATE VICINITY; AND IN SECTION 33, TOWNSHIP 4 SOUTH, RANGE 20 WEST; SECTIONS 4, 5, 7, 18, 19 & 30, TOWNSHIP 5 SOUTH, RANGE 20 WEST; AND IN SECTION 25, TOWNSHIP 5 SOUTH, RANGE 21 WEST.

You may attach additional information you believe will assist in informing the Division of the need for your request.

* Section 4: NWNE, N2NW, SWNW Section 5: E2 NE Section 7: SWNE S2NW W2SW S2SESW S2SWSE
 Section 18: NE E2NW Section 19: SW SW Section 30: W2E2NE W2NE W2 W2SE

KABIDWR 7-20-16

AMOUNT STATISTICS REPORT FOR POINTS OF DIVERSION UNDER A 49379 00

#####

AMOUNT STATISTICS REPORT FOR POINTS OF DIVERSION UNDER A 49379 00 MUN

Water Right and Points of Diversion Within 2.00 miles of point defined as:

2735 Feet North and 4719 Feet West of the Southeast Corner of Section 30 T 5S R 20W

GROUNDWATER ONLY

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=====
File Number      Use ST SR Dist (ft) Q4 Q3 Q2 Q1 FeetN FeetW Sec Twp Rng ID Batt Auth_Quan Add_Quan Unit
A__ 43636 00 MUN MM G          0 -- SW SW NW 2735 4719 30 5 20W 1 G 4 70.57 .00 AF
Same              294 -- NW NW SW 2443 4756 30 5 20W 3 B 4
Same              89 -- SW SW NW 2647 4730 30 5 20W 4 B 4
Same              95 -- SW SW NW 2829 4708 30 5 20W 5 B 4
Same             289 -- SW SW NW 3022 4682 30 5 20W 6 B 4
A__ 43636 00 STK MM G          0 -- SW SW NW 2735 4719 30 5 20W 1 G 4 165.43 .00 AF
Same              294 -- NW NW SW 2443 4756 30 5 20W 3 B 4
Same              89 -- SW SW NW 2647 4730 30 5 20W 4 B 4
Same              95 -- SW SW NW 2829 4708 30 5 20W 5 B 4
Same             289 -- SW SW NW 3022 4682 30 5 20W 6 B 4
A__ 43885 00 MUN MM G       1722 -- NW SE NE 3477 988 25 5 21W 5 G 4 68.73 .00 AF
Same              1878 -- NW SE NE 3561 1121 25 5 21W 1 B 4
Same              1623 -- NW SE NE 3444 895 25 5 21W 2 B 4
Same              1756 -- SW SE NE 3273 1104 25 5 21W 3 B 4
Same              1657 -- NW SE NE 3630 831 25 5 21W 4 B 4
A__ 43885 00 STK MM G       1722 -- NW SE NE 3477 988 25 5 21W 5 G 4 165.43 .00 AF
Same              1878 -- NW SE NE 3561 1121 25 5 21W 1 B 4
Same              1623 -- NW SE NE 3444 895 25 5 21W 2 B 4
Same              1756 -- SW SE NE 3273 1104 25 5 21W 3 B 4
Same              1657 -- NW SE NE 3630 831 25 5 21W 4 B 4
A__ 45323 00 IRR NK G       6149 -- SE SE NW 2715 2653 24 5 21W 6 G 4 86.00 86.00 AF
Same              6031 -- NE NE SW 2563 2675 24 5 21W 2 B 4
Same              6258 -- SE SE NW 2734 2829 24 5 21W 3 B 4
Same              6003 -- SW SW NE 2650 2478 24 5 21W 4 B 4
Same              6306 -- SW SW NE 2912 2630 24 5 21W 5 B 4
A__ 49379 00 MUN AY G          0 -- SW SW NW 2735 4719 30 5 20W 1 G 4 192.36 192.36 AF
Same              294 -- NW NW SW 2443 4756 30 5 20W 3 B 4
Same              89 -- SW SW NW 2647 4730 30 5 20W 4 B 4
Same              95 -- SW SW NW 2829 4708 30 5 20W 5 B 4
Same             289 -- SW SW NW 3022 4682 30 5 20W 6 B 4
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Total Net Quantities Authorized:   Direct      Storage
Total Requested Amount (AF) =     192.36      .00
Total Permitted Amount (AF) =       .00      .00
Total Inspected Amount (AF) =       .00      .00
Total Pro_Cert Amount (AF) =       .00      .00
Total Certified Amount (AF) =      86.00      .00
Total Vested Amount (AF) =         .00      .00
TOTAL AMOUNT (AF) =      278.36      .00

```

An * after the source of supply indicates a pending application for change under the file number.
 An * after the ID indicates a 15 AF exemption was granted under the file number.
 A "G" in the Batt column indicates the GEO CTR of a battery. A "B" indicates a well in the battery.
 The number in the Batt column is the number of wells in the battery.

49,379

Analysis Results

The selected PD is in an area to new appropriations.
The safe yield, based on the variables listed below is 638.33 AF.
Total prior appropriation in the circle is ~~278.36 AF~~ 227.14
Total quantity of water available for appropriation is ~~359.97 AF~~ → 411.19 AF

Meets safe yield

Safe Yield Variables

The area used for the analysis is set at 8,042 acres.
Potential annual recharge of the area is estimated to be 1.27 inches.
The percent of recharge available for appropriation is 75%.
Authorized Quantity values are as of 01-FEB-2016 and are based on Appropriated and Vested ground water right and possible stream nodes for GMD #2. Domestic, Term and Temporary water rights have been excluded.
There are 4 water right(s) and 15 point(s) of diversion within the circle.

File Number	Use	ST	SR	Q4	Q3	Q2	Q1	FeetN	FeetW	Sec	Twp	Rng	ID	Qind	Auth_Quant	Add_Quant	Tacres	Nacres
A 43636 00	MUN	LO	G		SW	SW	NW	2735	4719	30	05	20W	1	WRF	70.57	0.00		
Same	MUN	LO	G		NW	NW	SW	2443	4756	30	05	20W	3	WRF				
Same	MUN	LO	G		SW	SW	NW	2647	4730	30	05	20W	4	WRF				
Same	MUN	LO	G		SW	SW	NW	2829	4708	30	05	20W	5	WRF				
Same	MUN	LO	G		SW	SW	NW	3022	4682	30	05	20W	6	WRF				
Same	STK	LO	G		SW	SW	NW	2735	4719	30	05	20W	1	WRF				
Same	STK	LO	G		NW	NW	SW	2443	4756	30	05	20W	3	WRF				
Same	STK	LO	G		SW	SW	NW	2647	4730	30	05	20W	4	WRF				
Same	STK	LO	G		SW	SW	NW	2829	4708	30	05	20W	5	WRF				
Same	STK	LO	G		SW	SW	NW	3022	4682	30	05	20W	6	WRF				
A 43885 00	MUN	LO	G		NW	SE	NE	3561	1121	25	05	21W	1	WRF	68.73	0.00		
Same	MUN	LO	G		NW	SE	NE	3444	895	25	05	21W	2	WRF				
Same	MUN	LO	G		SW	SE	NE	3273	1104	25	05	21W	3	WRF				
Same	MUN	LO	G		NW	SE	NE	3630	831	25	05	21W	4	WRF				
Same	MUN	LO	G		NW	SE	NE	3477	988	25	05	21W	5	WRF				
Same	STK	LO	G		NW	SE	NE	3561	1121	25	05	21W	1	WRF				
Same	STK	LO	G		NW	SE	NE	3444	895	25	05	21W	2	WRF				
Same	STK	LO	G		SW	SE	NE	3273	1104	25	05	21W	3	WRF				
Same	STK	LO	G		NW	SE	NE	3630	831	25	05	21W	4	WRF				
Same	STK	LO	G		NW	SE	NE	3477	988	25	05	21W	5	WRF				
A 45323 00	IRR	NK	G		NE	NE	SW	2563	2675	24	05	21W	2	WR	86.00	86.00	80.00	80.00
Same	IRR	NK	G		SE	SE	NW	2734	2829	24	05	21W	3	WR				
Same	IRR	NK	G		SW	SW	NE	2650	2478	24	05	21W	4	WR				
Same	IRR	NK	G		SW	SW	NE	2912	2630	24	05	21W	5	WR				
Same	IRR	NK	G		SE	SE	NW	2715	2653	24	05	21W	6	WR				
A 49379 00	MUN	AY	G		SW	SW	NW	2735	4719	30	05	20W	1	WR	192.36	192.36		
Same	MUN	AY	G		NW	NW	SW	2443	4756	30	05	20W	3	WR				
Same	MUN	AY	G		SW	SW	NW	2647	4730	30	05	20W	4	WR				
Same	MUN	AY	G		SW	SW	NW	2829	4708	30	05	20W	5	WR				
Same	MUN	AY	G		SW	SW	NW	3022	4682	30	05	20W	6	WR				

70.57

~~68.73~~
70.57

86
227.14

~~192.36~~

idx	File	PRIORITY	Use	Modeled Quantity Q, af	Final Quantity Q, af
131	49325	2-Mar-15	IRR	86	86
132	49351	23-Mar-15	STK	122.76	122.76
133	49202	3-Nov-14	STK	41.4	41.4
134	49365	9-Apr-15	IRR	231	231
135	49422	6-Jul-15	IRR	30	30
136	49423	9-Jul-15	IND	5	5
137	49379	30-Apr-15	MUN	192.36	192.36
138	49411	18-Jun-15	IRR	54	54
139	49412	18-Jun-15	IRR	55	55
140	49418	29-Jun-15	REC	5	5
141	49428A	20-Jul-15	IRR	195	96
142	49449	31-Aug-15	IRR	195	195
143	49455	8-Sep-15	IRR	240	178
144	49439	13-Aug-15	IRR	170.8	170.8
145	49463	21-Sep-15	IRR	170.8	170.8
146	49464	21-Sep-15	IRR	267	267
147	49465	21-Sep-15	IRR	170.8	170.8
148	49492	26-Oct-15	IRR	100	100
149	49519	3-Dec-15	IRR	79	79
150	49522A	9-Dec-15	IRR	240	224

scaling factor	modeled avg50-yr impact 2050-2069	final avg50-yr impact 2050-2069	avg 50-yr response 2050-2069	reduced quantity with est. 10af impact
1	8.195	8.20	0.0953	
1	3.705	3.71	0.0302	
1	2.585	2.59	0.0624	
1	9.035	9.04	0.0391	
1	0.085	0.09	0.0028	
1	0.68	0.68	0.1360	
1	0	0.00	0.0000	
1	9.735	9.74	0.1803	
1	9.995	10.00	0.1817	
1	0	0.00	0.0000	
0.492307692	20.21	9.95	0.1036	96
1	9.335	9.34	0.0479	
0.741666667	13.455	9.98	0.0561	178
1	0	0.00	0.0000	
1	0	0.00	0.0000	
1	0	0.00	0.0000	
1	3.175	3.18	0.0318	
1	1.225	1.23	0.0155	
0.933333333	10.73	10.01	0.0447	224



Meets RRC restrictions

Within model domain

BowCRStocks impact = 37.4AF

Would NOT be within proposed moratorium area

sum				15551.46
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1636.70	568.49		
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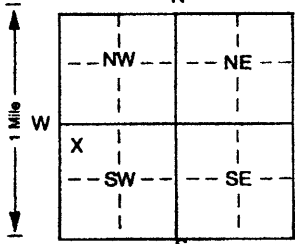
		IRR	21498.76	13653.03
		IND	638.00	308.60
		MUN	1152.36	913.36
		STK	1297.82	671.47
sum			24586.94	15546.46

1474.81	485.01	0.0686
15.52	11.49	0.0243
37.65	25.44	0.0327
108.73	46.54	0.0838
1636.70	568.49	0.0666

1 LOCATION OF WATER WELL:		Fraction	Section Number	Township Number	Range Number
County: Phillips		NW 1/4 NW 1/4 SW 1/4	30	T 5 S	R 20 E (W)

Distance and direction from nearest town or city street address of well if located within city?
 Approximately 4 3/4 miles south and 3 miles west of Logan

2 WATER WELL OWNER: City of Logan
 RR#, St. Address, Box # : P.O. Box 116
 City, State, ZIP Code : Logan, KS 67646
 Board of Agriculture, Division of Water Resources
 Application Number: 43,636

3 LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX: 	4 DEPTH OF COMPLETED WELL 161 ft. ELEVATION: unknown	
	Depth(s) Groundwater Encountered 1 ft. 2 ft. 3 ft. ft.	
	WELL'S STATIC WATER LEVEL 118 ft. below land surface measured on mo/day/yr 5-1-01	
	Pump test data: Well water was not checked ft. after hours pumping gpm	
Est. Yield unknown gpm: Well water was ft. after hours pumping gpm		
Bore Hole Diameter 18 in. to 163 ft., and in. to ft.		
WELL WATER TO BE USED AS: (5) Public water supply 8 Air conditioning 11 Injection well		
1 Domestic 3 Feedlot 6 Oil field water supply 9 Dewatering 12 Other (specify below)		
2 Irrigation 4 Industrial 7 Domestic (lawn & garden) 10 Monitoring well		
Was a chemical/bacteriological sample submitted to Department? Yes No (checked) If yes, mo/day/yrs sample was submitted		
Water Well Disinfected? Yes (checked) No		

5 TYPE OF BLANK CASING USED:		5 Wrought iron	8 Concrete tile	CASING JOINTS: Glued (checked) Clamped	
1 Steel		3 RMP (SR)	6 Asbestos-Cement	Welded	
(2) PVC		4 ABS	7 Fiberglass	Threaded	
Blank casing diameter 8 in. to 146 ft., Dia		8 in. to 159.5 ft., Dia		in. to ft.	
Casing height above land surface 18 in., weight		5.59 lbs./ft. Wall thickness or gauge No		.332	
TYPE OF SCREEN OR PERFORATION MATERIAL:		7 PVC		10 Asbestos-cement	
1 Steel		(3) Stainless steel		11 Other (specify)	
2 Brass		4 Galvanized steel		12 None used (open hole)	
3 Mill slot		5 Fiberglass		8 Saw cut	
4 Key punched		6 Concrete tile		9 Drilled holes	
SCREEN OR PERFORATION OPENINGS ARE:		7 Torch cut		10 Other (specify) ft.	
(1) Continuous slot		8 Gauzed wrapped		11 None (open hole)	
2 Louvered shutter		9 Wire wrapped		ft.	
SCREEN-PERFORATED INTERVALS: From 146 ft. to 156 ft., From ft. to ft.		ft. to ft. From ft. to ft.		ft. to ft.	
GRAVEL PACK INTERVALS: From 127 ft. to 163 ft., From ft. to ft.		ft. to ft. From ft. to ft.		ft. to ft.	

6 GROUT MATERIAL:		1 Neat cement	(2) Cement grout	3 Bentonite Sand	4 Other	Bentonite Holeplug
Compacted Soil		50% Bentonite Holeplug & 50% Sand				
Grout Intervals: From 0-5 ft. to 5-55 ft., From 55-75 ft. to 75-125 ft., From 125 ft. to 127 ft.						
What is the nearest source of possible contamination:		10 Livestock pens		14 Abandoned water well		
1 Septic tank		4 Lateral lines		15 Oil well/Gas well		
2 Sewer lines		7 Pit privy		11 Fuel storage		
3 Watertight sewer lines		8 Sewage lagoon		12 Fertilizer storage		
		9 Feedyard		13 Insecticide storage		
				16 Other (specify below)		
				None known		

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	4	Topsoil	158	163	Shale, black
4	10	Clay, sandy			
10	23	Clay, brown			
23	42	Clay, white			
42	53	Clay, brown			
53	69	Cemented sand with clay			
69	92	Sand, very fine, fine			
92	114	Clay, tan			
114	125	Sand and gravel, fine, medium			
125	127	Clay, gray			
127	135	Sand and gravel, very fine, fine, medium			
135	136	Cemented Sand			
136	156	Sand and gravel, fine, medium, 140 - 156 thirsty			
156	158	Clay, white and yellow			

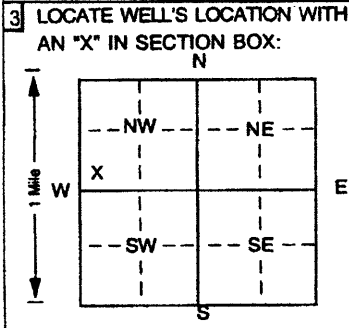
7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed (2) reconstructed or (3) plugged under my jurisdiction and was completed on (mo/day/year) 5-1-01 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No 185 This Water Well Record was completed on (mo/day/yr) 5-16-01 under the business name of Clarke Well & Equipment, Inc. by (signature) *[Signature]*

INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks, underline or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Topeka, Kansas 66620-0001. Telephone 785-296-5524. Send one to WATER WELL OWNER and retain one for your records. Fee of \$5.00 for each constructed well.

1 LOCATION OF WATER WELL:	Fraction	Section Number	Township Number	Range Number
County: Phillips	SW 1/4 SW 1/4 NW 1/4	30	T 5 S	R 20 E (W)

Distance and direction from nearest town or city street address of well if located within city?
 Approximately 4 3/4 miles south and 3 miles west of Logan

2 WATER WELL OWNER: City of Logan
 RR#, St. Address, Box # : P.O. Box 116
 City, State, ZIP Code : Logan, KS 67646
 Board of Agriculture, Division of Water Resources
 Application Number: 43,636



4 DEPTH OF COMPLETED WELL 163 ft. ELEVATION: unknown

Depth(s) Groundwater Encountered 1 ft. 2 ft. 3 ft. ft.

WELL'S STATIC WATER LEVEL 114 ft. below land surface measured on mo/day/yr 5-3-01

Pump test data: Well water was not checked ft. after hours pumping gpm

Est. Yield unknown gpm: Well water was ft. after hours pumping gpm

Bore Hole Diameter 18 in. to 163 ft., and in. to ft.

WELL WATER TO BE USED AS: (5) Public water supply 8 Air conditioning 11 Injection well

1 Domestic 3 Feedlot 6 Oil field water supply 9 Dewatering 12 Other (specify below)

2 Irrigation 4 Industrial 7 Domestic (lawn & garden) 10 Monitoring well

Was a chemical/bacteriological sample submitted to Department? Yes No If yes, mo/day/yr sample was submitted

Water Well Disinfected? Yes No

5 TYPE OF BLANK CASING USED:

1 Steel 3 RMP (SR) 5 Wrought iron 8 Concrete tile CASING JOINTS: Glued Clamped

(2) PVC 4 ABS 6 Asbestos-Cement 9 Other (specify below) Welded

7 Fiberglass Threaded

Blank casing diameter 8 in. to 148 ft., Dia 8 in. to 161.5 ft., Dia in. to ft.

Casing height above land surface 18 in., weight 5.59 lbs./ft. Wall thickness or gauge No .332

TYPE OF SCREEN OR PERFORATION MATERIAL:

1 Steel (3) Stainless steel 5 Fiberglass 7 PVC 10 Asbestos-cement

2 Brass 4 Galvanized steel 6 Concrete tile 8 RMP (SR) 11 Other (specify)

12 None used (open hole)

SCREEN OR PERFORATION OPENINGS ARE:

(1) Continuous slot 3 Mill slot 5 Gauzed wrapped 8 Saw cut 11 None (open hole)

2 Louvered shutter 4 Key punched 6 Wire wrapped 9 Drilled holes

7 Torch cut 10 Other (specify) ft.

SCREEN-PERFORATED INTERVALS: From 148 ft. to 158 ft., From ft. to ft.

From ft. to ft., From ft. to ft.

GRAVEL PACK INTERVALS: From 128 ft. to 163 ft., From ft. to ft.

From ft. to ft., From ft. to ft.

6 GROUT MATERIAL: 1 Neat cement (2) Cement grout 3 Bentonite Sand 4 Other Bentonite Holeplug

50% Bentonite Holeplug & 50% Sand

Grout Intervals: From 0 - 5 ft. to 5 - 55 ft., From 55 - 75 ft. to 75 - 126 ft., From 126 ft. to 128 ft.

What is the nearest source of possible contamination:

1 Septic tank 4 Lateral lines 7 Pit privy 11 Fuel storage 14 Abandoned water well

2 Sewer lines 5 Cess pool 8 Sewage lagoon 12 Fertilizer storage 15 Oil well/Gas well

3 Watertight sewer lines 6 Seepage pit 9 Feedyard 13 Insecticide storage None known

Direction from well? How many feet?

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	4	Topsoil			
4	32	Clay, brown			
32	36	Sand and gravel, fine, medium			
36	44	Clay, white			
44	70	Clay, brown and white, streaks of cemented sand			
70	80	Sand, fine			
80	105	Clay, white			
105	115	Sand, fine with clay			
115	158	Sand and gravel, fine, medium			
158	163	Clay, yellow and white			

WATER RESOURCES RECEIVED
APR 30 2015
KS DEPT OF AGRICULTURE

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed (2) reconstructed or (3) plugged under my jurisdiction and was completed on (mo/day/year) 5-3-01 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No 185 This Water Well Record was completed on (mo/day/yr) 5-16-01 under the business name of Clarke Well & Equipment, Inc. by (signature)

INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks, underline or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Topeka, Kansas 66620-0001. Telephone 785-296-5524. Send one to WATER WELL OWNER and retain one for your records. Fee of \$5.00 for each constructed well.

1 LOCATION OF WATER WELL:	Fraction	Section Number	Township Number	Range Number
County: Phillips	SW 1/4 SW 1/4 NW 1/4	30	T 5 S	R 20 E W

Distance and direction from nearest town or city street address of well if located within city?
 Approximately 4 3/4 miles south and 3 miles west of Logan

2 WATER WELL OWNER: City of Logan
 RR#, St. Address, Box # : P.O. Box 116 Board of Agriculture, Division of Water Resources
 City, State, ZIP Code : Logan, KS 67646 Application Number: 43,636

3 LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX:	4 DEPTH OF COMPLETED WELL 163 ft. ELEVATION: unknown	
--	--	--

Depth(s) Groundwater Encountered 1 ft. 2 ft. 3 ft.

WELL'S STATIC WATER LEVEL 115 ft. below land surface measured on mo/day/yr 5-9-01

Pump test data: Well water was not checked ft. after hours pumping gpm

Est. Yield unknown gpm: Well water was ft. after hours pumping gpm

Bore Hole Diameter 18 in. to 163 ft., and in. to ft.

WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well

1 Domestic 3 Feedlot 6 Oil field water supply 9 Dewatering 12 Other (specify below)

2 Irrigation 4 Industrial 7 Domestic (lawn & garden) 10 Monitoring well

Was a chemical/bacteriological sample submitted to Department? Yes No If yes, mo/day/yr sample was submitted

Water Well Disinfected? Yes No

5 TYPE OF BLANK CASING USED:

1 Steel	3 RMP (SR)	5 Wrought iron	8 Concrete tile	CASING JOINTS: Glued <input checked="" type="checkbox"/> Clamped	
2 PVC	4 ABS	6 Asbestos-Cement	9 Other (specify below)	Welded	
		7 Fiberglass		Threaded	

Blank casing diameter 8 in. to 148 ft., Dia 8 in. to 161.5 ft., Dia in. to ft

Casing height above land surface 18 in., weight 5.59 lbs./ft. Wall thickness or gauge No 332

TYPE OF SCREEN OR PERFORATION MATERIAL:

1 Steel	3 Stainless steel	5 Fiberglass	8 RMP (SR)	10 Asbestos-cement
2 Brass	4 Galvanized steel	6 Concrete tile	9 ABS	11 Other (specify)
				12 None used (open hole)

SCREEN OR PERFORATION OPENINGS ARE:

1 Continuous slot	3 Mill slot	5 Gauzed wrapped	8 Saw cut	11 None (open hole)
2 Louvered shutter	4 Key punched	6 Wire wrapped	9 Drilled holes	
		7 Torch cut	10 Other (specify)	ft.

SCREEN-PERFORATED INTERVALS: From 148 ft. to 158 ft., From ft. to ft.

GRAVEL PACK INTERVALS: From 134 ft. to 163 ft., From ft. to ft.

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout 3 Bentonite Sand 4 Other Bentonite Holeplug & 50% Sand Bentonite Holeplug

Grout Intervals: From 0 - 6 ft. to 6 - 55 ft., From 55 - 80 ft. to 80 - 131 ft., From 131 ft. to 134 ft.

What is the nearest source of possible contamination:

1 Septic tank	4 Lateral lines	7 Pit privy	10 Livestock pens	14 Abandoned water well
2 Sewer lines	5 Cess pool	8 Sewage lagoon	11 Fuel storage	15 Oil well/Gas well
3 Watertight sewer lines	6 Seepage pit	9 Feedyard	12 Fertilizer storage	16 Other (specify below)
			13 Insecticide storage	None known

Direction from well? How many feet?

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	4	Topsoil	158	160	Clay, white
4	36	Clay, brown, sandy	160	163	Shale, black
36	43	Clay, white, hard			
43	55	Clay, brown and white, very hard			
55	67	Clay and cemented sand			
67	85	Sand, fine, medium			
85	105	Clay, green and grayish, very hard			
105	116	Clay, white, hard			
116	120	Sand and gravel, very fine, fine			
120	132	Sand and gravel, fine, medium			
132	133	Clay, gray			
133	138	Sand and gravel, fine, medium			
138	139	Clay, gray			
139	158	Sand and gravel, fine, medium			

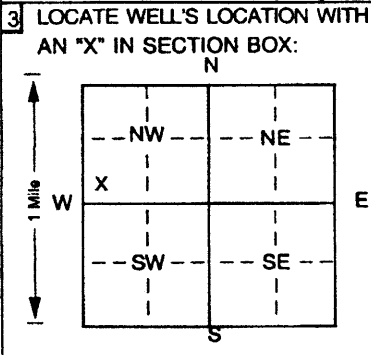
7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/year) 5-9-01 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No 185 This Water Well Record was completed on (mo/day/yr) 5-16-01 under the business name of Clarke Well & Equipment, Inc. by (signature) *David W. Clarke*

INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks, underline or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Topeka, Kansas 66620-0001. Telephone 785-296-5524. Send one to WATER WELL OWNER and retain one for your records. Fee of \$5.00 for each constructed well.

1 LOCATION OF WATER WELL: Fraction SW 1/4 SW 1/4 NW 1/4 Section Number 30 Township Number T 5 S Range Number R 20 E **(W)**

Distance and direction from nearest town or city street address of well if located within city?
 Approximately 4 3/4 miles south and 3 miles west of Logan

2 WATER WELL OWNER: City of Logan
 RR#, St. Address, Box # : P.O. Box 116 Board of Agriculture, Division of Water Resources
 City, State, ZIP Code : Logan, KS 67646 Application Number: 43,636



4 DEPTH OF COMPLETED WELL 158 ft. ELEVATION: unknown

Depth(s) Groundwater Encountered 1 ft. 2 ft. 3 ft. ft.

WELL'S STATIC WATER LEVEL 113 ft. below land surface measured on mo/day/yr 5-10-01

Pump test data: Well water was not checked ft. after hours pumping gpm

Est. Yield unknown gpm: Well water was ft. after hours pumping gpm

Bore Hole Diameter 18 in. to 159 ft., and in. to ft.

WELL WATER TO BE USED AS: **(5)** Public water supply 8 Air conditioning 11 Injection well
 1 Domestic 3 Feedlot 6 Oil field water supply 9 Dewatering 12 Other (specify below)
 2 Irrigation 4 Industrial 7 Domestic (lawn & garden) 10 Monitoring well

Was a chemical/bacteriological sample submitted to Department? Yes No If yes, mo/day/yrs sample was submitted Water Well Disinfected? Yes No

5 TYPE OF BLANK CASING USED:

1 Steel 3 RMP (SR) 5 Wrought iron 8 Concrete tile CASING JOINTS: Glued Clamped
(2) PVC 4 ABS 6 Asbestos-Cement 9 Other (specify below) Welded
 7 Fiberglass Threaded

Blank casing diameter 8 in. to 143 ft., Dia 8 in. to 156.5 ft., Dia in. to ft.

Casing height above land surface 18 in., weight 5.59 lbs./ft. Wall thickness or gauge No 332

TYPE OF SCREEN OR PERFORATION MATERIAL:

1 Steel **(3)** Stainless steel 5 Fiberglass 7 PVC 10 Asbestos-cement
 2 Brass 4 Galvanized steel 6 Concrete tile 8 RMP (SR) 11 Other (specify)
 SCREEN OR PERFORATION OPENINGS ARE: 5 Gauzed wrapped 8 Saw cut 11 None (open hole)
(1) Continuous slot 3 Mill slot 6 Wire wrapped 9 Drilled holes
 2 Louvered shutter 4 Key punched 7 Torch cut 10 Other (specify) ft.

SCREEN-PERFORATED INTERVALS: From 143 ft. to 153 ft., From ft. to ft.

GRAVEL PACK INTERVALS: From 134 ft. to 159 ft., From ft. to ft.

6 GROUT MATERIAL: 1 Neat cement **(2)** Cement grout 3 Bentonite Sand 4 Other Bentonite Holeplug & 50% Sand
 Compacted Soil 50% Bentonite Holeplug & 50% Sand Bentonite Holeplug

Grout Intervals: From 0 - 5 ft. to 5 - 55 ft., From 55 - 80 ft. to 80 - 130 ft., From 130 ft. to 134 ft.

What is the nearest source of possible contamination:

1 Septic tank 4 Lateral lines 7 Pit privy 10 Livestock pens 14 Abandoned water well
 2 Sewer lines 5 Cess pool 8 Sewage lagoon 11 Fuel storage 15 Oil well/Gas well
 3 Watertight sewer lines 6 Seepage pit 9 Feedyard 12 Fertilizer storage 16 Other (specify below)
None known

Direction from well? How many feet?

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	2	Topsoil			
2	14	Sand, fine			
14	25	Clay, brown			
25	40	Clay, white and brown			
40	55	Clay, brown			
55	81	Sand, very fine, fine			
81	115	Clay, grayish green			
115	133	Sand and gravel, fine, medium			
133	136	Clay, green			
136	153	Sand and gravel, fine, medium, some clay streaks			
153	156	Clay, white and yellow			
156	159	Shale, black			

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was **(1) constructed** (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/year) 5-10-01 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No 185 This Water Well Record was completed on (mo/day/yr) 5-16-01 under the business name of Clarke Well & Equipment, Inc. by (signature) *Clarke Well & Equipment, Inc.*

INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks, underline or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Topeka, Kansas 66620-0001. Telephone 785-296-5524. Send one to WATER WELL OWNER and retain one for your records. Fee of \$5.00 for each constructed well.

SCANNED

FEE SCHEDULE

1. The fee for an application for a permit to appropriate water for beneficial use, except for domestic use, shall be (see paragraph No. 2 below if requesting storage):

ACRE-FEET	FEE
0-100	\$200.00
101-320	\$300.00 ←
More than 320	\$300.00 plus \$20.00 for each additional 100 acre-feet or any part thereof.

2. The fee for an application in which storage is requested, except for domestic use, shall be:

ACRE-FEET	FEE
0-250	\$200.00
More than 250	\$200.00 plus \$20.00 for each additional 250 acre-feet of storage or any part thereof.

Note: If an application requests both direct use *and* storage, the fee charged shall be as determined under No. 1 or No. 2 above, whichever is greater, but not both fees.

3. The fee for an application for a permit to appropriate water for water power or dewatering purposes shall be \$100.00 plus \$200.00 for each 100 cubic feet per second, or part thereof, of the diversion rate requested.

Note: The applicant shall notify the Chief Engineer and pay the statutorily required field inspection fee of \$400.00 when construction of the works for diversion has been completed, except that for applications filed on or after July 1, 2009, for works constructed for sediment control use and for evaporation from a groundwater pit for industrial use shall be accompanied by a field inspection fee of \$200.00.

MAKE CHECKS PAYABLE TO THE KANSAS DEPARTMENT OF AGRICULTURE

ATTENTION

A Water Conservation Plan may be required per K.S.A. 82a-733. A statement that your application for permit to appropriate water may be subject to the minimum desirable streamflow requirements per K.S.A. 82a-703a, b, and c may also be required from you. After the Division of Water Resources has had the opportunity to review your application, you will be notified whether or not you will need to submit a Water Conservation Plan. You also may be required to install a water flow meter or water stage measuring device on your diversion works prior to diverting water. There may be other special conditions or Groundwater Management District regulations that you will need to comply with if this application is approved.

CONVERSION FACTORS

1 acre-foot equals 325,851 gallons

1 million gallons equal 3.07 acre-feet

WATER RESOURCES
RECEIVED

APR 30 2015

KS DEPT OF AGRICULTURE

SCANNED

Baum, Kristen

From: Stewart, Kelly
Sent: Thursday, July 21, 2016 3:48 PM
To: Baum, Kristen
Cc: Billinger, Mark; Hageman, Rebecca
Subject: RE: 49,379 - City of Logan

Kristen,

I have no objection to the approval of the referenced application.

Kelly

From: Baum, Kristen
Sent: Thursday, July 21, 2016 3:08 PM
To: Stewart, Kelly <Kelly.Stewart@ks.gov>
Cc: Billinger, Mark <Mark.Billinger@ks.gov>
Subject: FW: 49,379 - City of Logan

Revised version referring to PL-007 as a *vested* right.

From: Baum, Kristen
Sent: Thursday, July 21, 2016 1:33 PM
To: Stewart, Kelly
Cc: Billinger, Mark
Subject: 49,379 - City of Logan

Kelly,

Attached is my memo for the City of Logan new app. The certificates for two batteries have been issued. The quantity will be limited to 45.99 mgly when combined with 43636 and 43885 so that no new Ogallala water is being authorized.

Please provide your recommendation.

Thanks,

Kristen A. Baum
Division of Water Resources – Water Appropriations
Kansas Department of Agriculture
1320 Research Park Drive
Manhattan KS 66502
(785) 564-6627

My email address has changed: kristen.baum@ks.gov

KANSAS
RURAL
WATER
association

Quality water, quality life

P.O. Box 226 • Seneca, KS 66538 • 785/336-3760
FAX 785/336-2751 • <http://www.krwa.net>

June 1, 2016

Charlotte Philip
Kansas Department of Agriculture
Division of Water Resources
1320 Research Park Drive
Manhattan, Kansas 66502-5000

RE: Water Right Certificates
Appropriation of Water
File Nos. 43,636 & 43,885

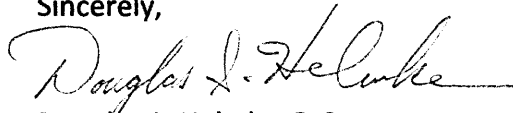
Dear Ms. Philip:

On May 25, 2016, I met with City of Logan Mayor Max Lowery and City Clerk Kristi West to discuss the proposal that was presented to me in our telephone conversation with Brent Turney and Kristen Baum. I explained to the City of Logan representatives that it appears to the Division of Water Resources (DWR) staff that the individual quantities of the two referenced appropriations for municipal use have been perfected. Because of this, and because the water authorized for stockwatering use was not put to beneficial use before the deadline of December 31, 2005, it was proposed that certificates of appropriation be issued now for the referenced file numbers for municipal use only. I explained to the City of Logan staff that with their permission, I would meet with the DWR staff at a future date to confirm what was previously discussed by telephone and relay permission to issued certificates before the expiration of the perfection deadlines previously granted.

On this day, you and I met to confirm the details of the proposed Draft Certificates and the place of use to be authorized. The City of Logan requests that Draft Certificates be produced and that the City of Logan be given the typical 30-day review period to check for accuracy, etc., in the proposed documents. The City will review the Draft Certificates as soon as possible to allow the review of Application, File No. 49,379 to continue.

Thanks again for working with us to simplify these water rights and helping the City of Logan meet their residents' need. If there are any new issues that need to be discussed, please call me. You can reach me by telephone at 785/640-4701, by e-mail at dhelmke@krwa.net or by writing to 6847 SE 29th Street, Tecumseh, Kansas 66542-9571.

Sincerely,



Douglas S. Helmke, P.G.
Water Rights / Source Water Specialist
Kansas Rural Water Association

DSH

c: KRWA
Mayor Max Lowery

City of Logan Water Rights - Proposed

Rates and Quantities

File Numbers	Rate	Quantity	Additional Rate	Additional Quantity	Notes:
PL 007	175	12.500	175	12.500	Well No. 8
7,867	500	50.180	500	50.180	Well Nos. 3 & 7
43,636	800	22.996	5 800	0.000	East Battery
43,885	800	22.996	5 800	0.000	West Battery
49,379	800	22.996	5 0	0.000	East Battery
Total			2275	62.680	

File No. 49,379 to be limited to 45.992 m.g.y. when combined with File Nos. 43,636 & 43,885.

File No. 49,379 also to be limited to 62.680 m.g.y. when combined with File Nos. PL 007; 7,867; 43,636 & 43,885.

File No. 49,379 also to be limited to 800 g.p.m. when combined with File No. 43,636.

Rate value is Gallons per Minute (gpm)

Quantity value is Million Gallons Per Year (m.g.y.)



P.O. Box 226 • Seneca, KS 66538 • 785/336-3760
FAX 785/336-2751 • <http://www.krwa.net>

April 6, 2016

Kristen A. Baum
Division of Water Resources
Kansas Department of Agriculture
1320 Research Park Drive
Manhattan, Kansas 66502-5000

WATER RESOURCES
RECEIVED

RE: Application
File No. 49,379

APR 08 2016

KS DEPT OF AGRICULTURE

Dear Ms. Baum:

I met with the Mayor Max Lowry, City Clerk Kristy West and Water System Operator David Snow on March 22, 2016, to discuss your letter dated February 11, 2016, and the referenced application. At this meeting, I was authorized to request that modifications be made to the application to possibly alleviate the concerns of your office.

Because in some years it has not been possible to divert the total quantity authorized for municipal use from nearby Appropriation of Water, File No. 43,885, due to occasional, seasonal-low groundwater levels, it is now proposed that Application, File No. 49,379 show the requested quantity to be 22.996 million gallons per year (m.g.y.), limited to 45.992 m.g.y. when combined with File Nos. 43,636 & 43,885. This limitation will result in no additional water being appropriated from the Ogallala Aquifer for municipal use. The proposed additional limitation to 62.680 m.g.y. when combined with File Nos. PL 007; 7,867; 43,636 & 43,885 (for municipal use) remains unchanged to clarify that no additional water is authorized, and that the total quantity currently appropriated remains the same. Also add a proposed rate of diversion limitation to a total rate of 800 gallons per minute (g.p.m.) when combined with File No. 43,636, which results in no additional rate of diversion.

If it helps with the approval of the referenced application, the City of Logan would welcome a determination of the perfection of the Stockwatering Use under File Nos. 43,636 & 43,885, which have perfection periods that appear to have expired in 2005.

In summary, please reduce the requested quantity shown on the application to 22.996 m.g.y., add a proposed limitation on the quantity to 45.992 m.g.y. when combined with File Nos. 43,636 & 43,885, and add a proposed limitation on the rate to 800 g.p.m. when combined with File No. 43,636.

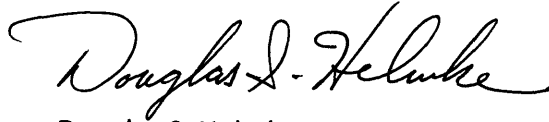
SCANNED

RE: Application, File No. 49,379

Page No. 2

If you have any questions about these requests, or if additional information is needed, you can reach me by telephone at 785/640-4701, by e-mail at dhelmke@krwa.net or by writing to 6847 SE 29th Street, Tecumseh, Kansas 66542-9571.

Sincerely,



Douglas S. Helmke, P.G.
Water Rights / Source Water Specialist
Kansas Rural Water Association

DSH

c: KRWA
City of Logan

WATER RESOURCES
RECEIVED

APR 08 2016

KS DEPT OF AGRICULTURE
SCANNED

1320 Research Park Drive
Manhattan, Kansas 66502
(785) 564-6700



900 SW Jackson, Room 456
Topeka, Kansas 66612
(785) 296-3556

Jackie McClaskey, Secretary

Governor Sam Brownback

March 10, 2016

CITY OF LOGAN
CITY CLERK'S OFFICE
PO BOX 116
LOGAN KS 67646

RE: Application
File No. 49,379

Dear Sir or Madam:

In response to Douglas Helmke's written request received in this office on March 9, 2016, the Chief Engineer will delay further action on the above referenced application, until **April 11, 2016**. In order for the application to retain its priority of filing, the requested information must be submitted to our office before that date or within any authorized extension of time thereof. If you wish to request additional time, you must do so in writing before April 11, 2016.

If you have any questions, please contact our office at (785) 564-6640. If you wish to discuss a specific file, please have the file number ready so that we may help you more efficiently.

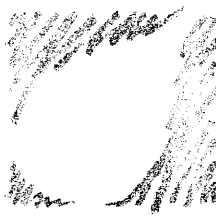
Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth A. Kopp".

Kenneth A. Kopp, P.G.
New Application Unit Supervisor
Water Appropriation Program

pc: Stockton Field Office
KRWA - Douglas S. Helmke, P.G.

SCANNED



KANSAS
RURAL
WATER
association
Quality water, quality life

P.O. Box 226 • Seneca, KS 66538 • 785/336-3760
FAX 785/336-2751 • <http://www.krwa.net>

March 9, 2016

Kristen A. Baum
Division of Water Resources
Kansas Department of Agriculture
1320 Research Park Drive
Manhattan, Kansas 66502-5000

WATER RESOURCES
RECEIVED

MAR 11 2016

KS DEPT OF AGRICULTURE

RE: Application
File No. 49,379

Dear Ms. Baum:

The City of Logan needs an extension of time to supply the additional information you requested in your letter dated February 11, 2016. The information you requested was to justify the quantity of water requested by the Application for Permit to Appropriate Water identified as File No. 49,379. A 30-day extension to April 11, 2016, should be sufficient to supply information that will allow you to complete the review of the application.

Please grant a 30-day extension to April 11, 2016.

If you have any questions about this request, you can reach me by telephone at 785/640-4701, by e-mail at dhelmke@krwa.net or by writing to 6847 SE 29th Street, Tecumseh, Kansas 66542-9571.

Sincerely,

Douglas S. Helmke, P.G.
Water Rights / Source Water Specialist
Kansas Rural Water Association

DSH

c: KRWA
City of Logan

SCANNED

1320 Research Park Drive
Manhattan, Kansas 66502
(785) 564-6700



900 SW Jackson, Room 456
Topeka, Kansas 66612
(785) 296-3556

Jackie McClaskey, Secretary

Governor Sam Brownback

February 11, 2016

CITY OF LOGAN
CITY CLERK'S OFFICE
PO BOX 116
LOGAN KS 67646

Re: Pending Application, File No. 49,379

Dear Sir or Madam:

The Division of Water Resources (DWR) has conducted a preliminary review of your pending application referenced above, proposing the appropriation of groundwater for municipal use by the City of Logan. Additional information is necessary in order for us to continue processing your application.

K.S.A. 82a-707(e) limits the quantity of water that can be appropriated to that which would be considered reasonable for the proposed use. As such, DWR requires that applicants provide adequate justification for the quantity of water requested. According to the Municipal Application Supplemental Information Sheet provided with your application, the current population for the City of Logan is 600 people, and is not projected to increase over the next 20 years. The average per capita water use for public water suppliers in your region is 140 gallons per capita per day¹. Using these figures, the projected water needs for the City of Logan would be 30.66 million gallons per year (mgy), which is less than half the quantity of water requested by the pending application. In the Amended Orders for Appropriations of Water, File Nos. 43,636 and 43,885 issued on October 29, 2001, the total quantity of water considered reasonable for municipal purposes was determined to be 44.79 mgy, at which time the City's population was 627 people. In either case, the City's projected water needs should already be sufficiently met by the quantities currently appropriated by File Nos. 43,636 and 43,885. Therefore, additional information is needed to justify why the quantity of water requested is necessary, in order for DWR to continue processing your pending application.

It is noted that the above referenced pending application was likely filed in response to a Notice of Non-Compliance issued by DWR for exceeding the quantities of water authorized by Appropriations of Water, File Nos. 43,636 and 43,885. Correspondence dated February 16, 2015 from the Kansas Rural Water Association notes issues with your 2014 Water Use Report that may be due to inaccurate metering. In past Water Use Reports, discrepancies in the Metered Quantity of Water (Part A) and Raw Water Diverted (Part B) have been noted. Furthermore, Unaccounted for Water has been reported to be as much as 30% in the past. These issues may need to be resolved or explained in order to provide adequate justification for the quantity of water requested by your pending application.

You have a period of 30 days (**until March 11, 2016**) to either (1) submit additional information to our office or (2) request additional time beyond the 30 days to submit additional information. If you wish to request additional time, you must do so **in writing**, before the 30 day period expires. In order for the application to

City of Logan
February 11, 2016
Page 2 of 2

retain its priority of filing, the requested information must be returned to this office on or before **March 11, 2016**, or within any authorized extension of time thereof. Any relevant credible information submitted within the time allowed will be given due consideration, prior to final action on the application. If you have any questions, please contact me at (785) 564-6632 or Ken Kopp at (785) 564-6634. If you wish to discuss a specific file, please have the file number ready so that we may help you more efficiently.

Sincerely,



Kristen A. Baum
Environmental Scientist
Water Appropriation Program

pc: Stockton Field Office
Douglas S. Helmke, L.G. – Kansas Rural Water Assn., 6847 SE 29th St., Tecumseh, KS 66542-9571

¹Kenny, J.F., 2014, Public-supply water use in Kansas, 1990–2012: U.S. Geological Survey Fact Sheet 2014–3116, 4 p., <http://dx.doi.org/10.3133/fs20143116>. ISSN 2327-6932 (online)

1320 Research Park Drive
Manhattan, Kansas 66502

Jackie McClaskey, Secretary



Phone: (785) 564-6700
Fax: (785) 564-6777
Email: ksag@kda.ks.gov
www.agriculture.ks.gov
Sam Brownback, Governor

May 1, 2015

CITY OF LOGAN
PO BOX 116
LOGAN KS 67646

RE: Application
File No. 49379

Dear Sir or Madam:

Your application for permit to appropriate water in 30-5S-20W In Phillips County, was received and has been assigned the file number noted above.

As a matter of record, the Division of Water Resources has on hand a large number of applications awaiting processing. Therefore to be fair to all concerned, and so that we can process those applications on hand in the order they were received, we intend to concentrate on the backlog of applications until the issue is resolved. Once review of your application has begun, we will contact you, if additional information is required.

In accordance with the provisions of the Kansas Water Appropriation Act, a portion of which is included below, the use of water as proposed prior to approval of the application is unlawful. Once approved, compliance with the terms, conditions and limitations of the permit is necessary. Conservation of the water resources of Kansas is required.

Section 82a-728 of the Kansas Water Appropriation Act, provides (a) except for the appropriation of water for the purpose of domestic use, . . . it shall be unlawful for any person to appropriate or threaten to appropriate water from any source without first applying for and obtaining a permit to appropriate water in accordance with the provisions of the Water Appropriation Act or for any person to violate any condition of a vested right, appropriation right or an approved application for a permit to appropriate water for beneficial use.

(b) (1) The violation of any provision of this section by any person is a class C misdemeanor . . .

A class C misdemeanor is punishable by a fine not to exceed \$500 and/or a term of confinement not to exceed one month in the county jail. Each day that the violation occurs constitutes a separate offense.

If you have any questions, please contact me at (785) 564-6643. If you wish to discuss a specific file, please have the file number ready so that we may help you more efficiently.

Sincerely,

A handwritten signature in cursive script that reads "Brent A. Turney".

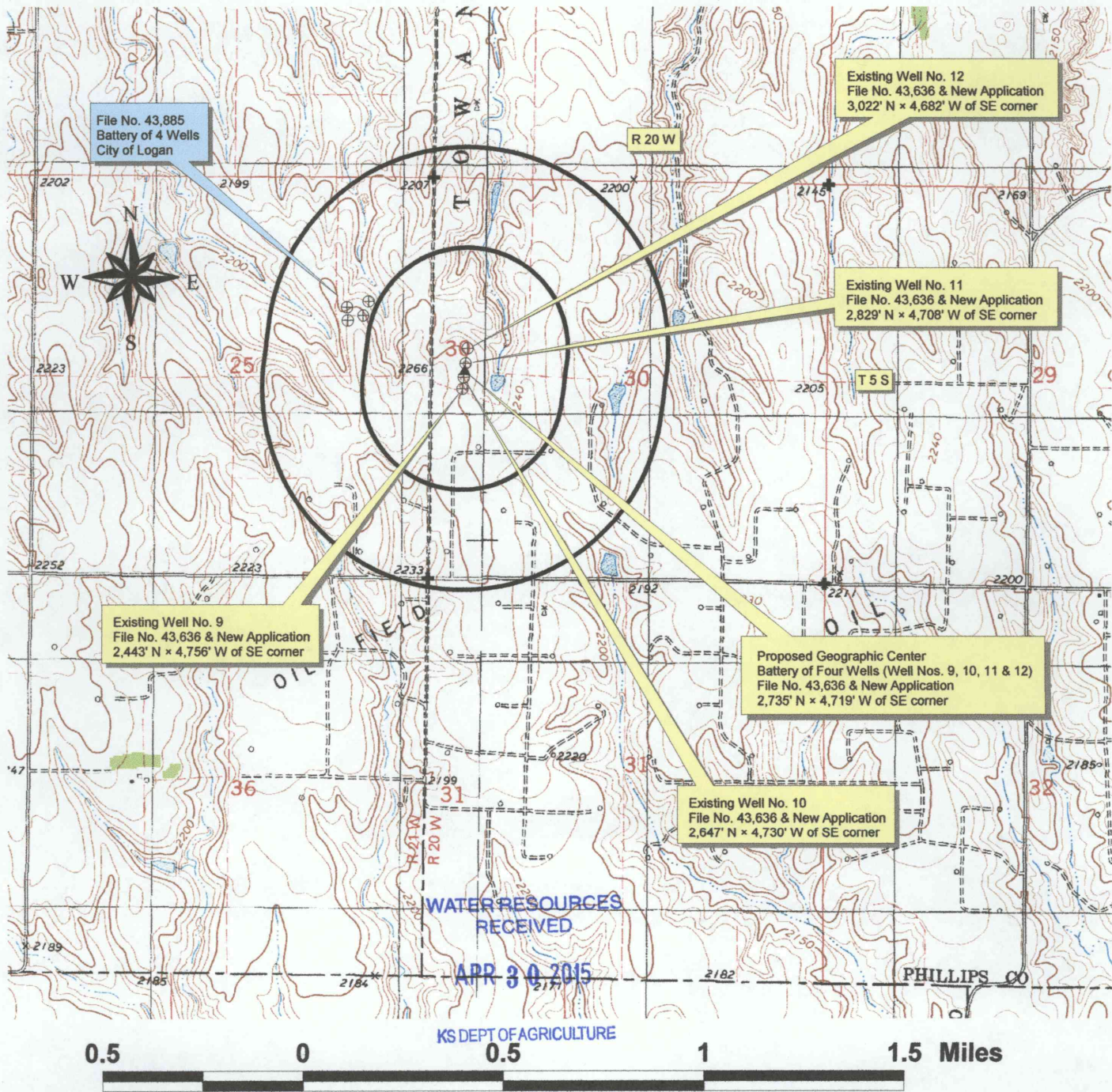
Brent Turney, L.G.
Change Application Unit Supervisor
Water Appropriation Program

BAT: dlw
pc: STOCKTON Field Office
GMD

SCANNED

Application for Permit to Appropriate Water City of Logan, Kansas

File No. 49,379



Legend

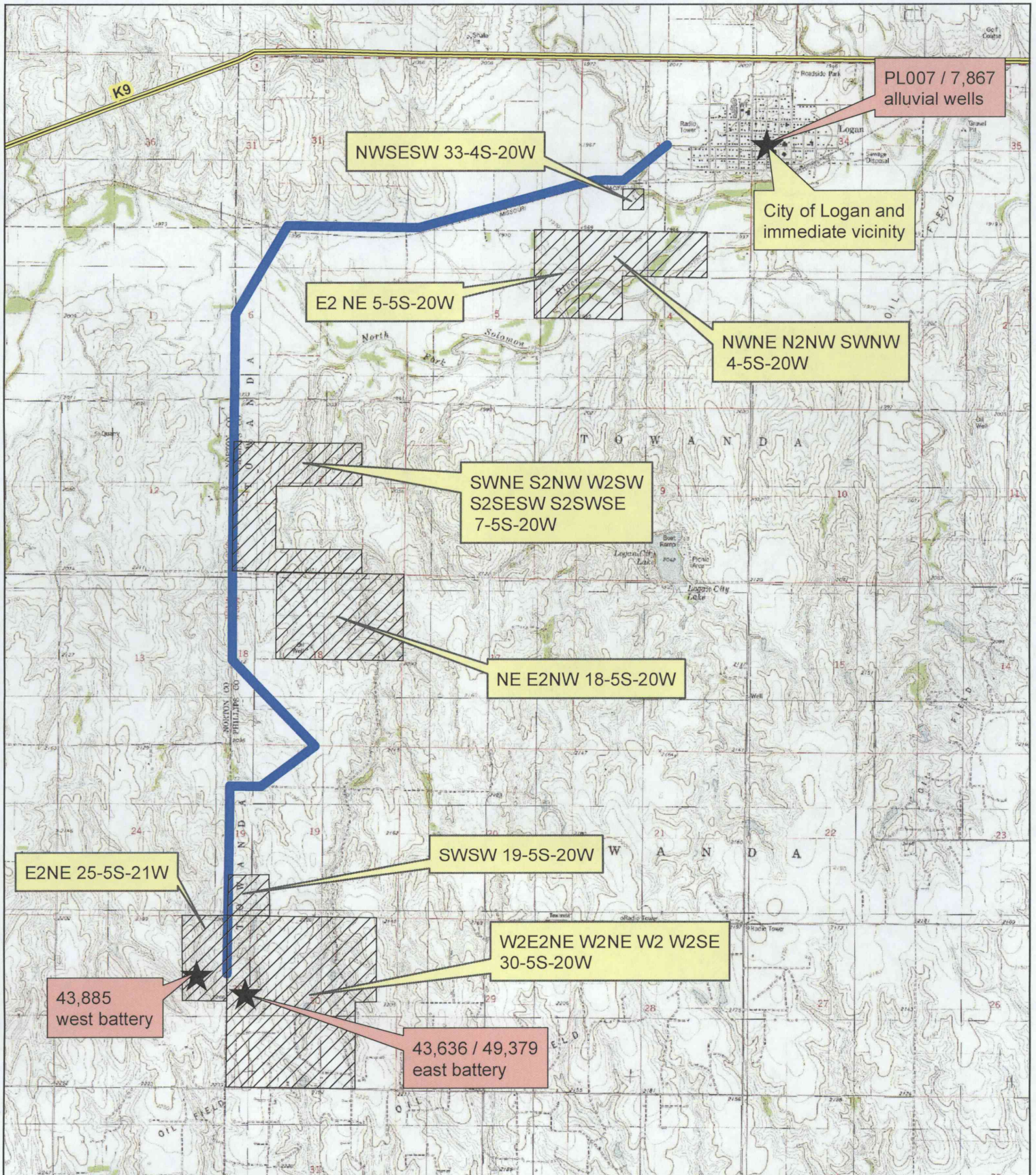
- ▲ Geographic Center of Battery
- ⊕ Municipal Well
- ⊕ Section Corner




All wells of every kind within 1/2-mile of the proposed wells have been plotted.

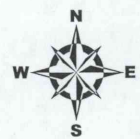
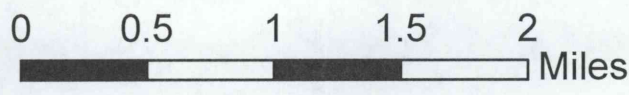
Max Lowery
(Signature)



City of Logan



-  Point of Diversion
-  Place of Use
-  Transmission Line



1 inch = 4,000 feet
 KAB/DWR
 Date: 6/14/2016