

KEARNEY

2013 Annual Water Quality Report

(Consumer Confidence Report)

MO1010416

This report is intended to provide you with important information about your drinking water and the efforts made to provide safe drinking water.

Atencion!

Este informe contiene información muy importante. Tradúscalo o pregúntele a alguien que lo entienda bien.

[Translated: This report contains very important information. Translate or ask someone who understands this very well.]

What is the source of my water?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Our water comes from the following source(s):

Source Name	Type
WELL # 1 W3	GROUND WATER
WELL # 2 W4	GROUND WATER
WELL # 3 W5	GROUND WATER

Our drinking water is supplied from another water system through a Consecutive Connection (CC). To find out more about our drinking water sources and additional chemical sampling results, please contact our office at the number provided below.

Buyer Name	Seller Name
KEARNEY	KANSAS CITY

Source Water Assessment:

The Department of Natural Resources conducted a source water assessment to determine the susceptibility of our water source to potential contaminants. This process involved the establishment of source water area delineations for each well or surface water intake and then a contaminant inventory was performed within those delineated areas to assess potential threats to each source. Assessment maps and summary information sheets are available on the internet at <http://maproom.missouri.edu/swjmaps/pwssid.htm>. To access the maps for your water system you will need the State-assigned identification code, which is printed at the top of this report. The Source Water Inventory Project maps and information sheets provide a foundation upon which a more comprehensive source water protection plan can be developed.

Why are there contaminants in my water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Contaminants that may be present in source water include:

- A. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- B. Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.
- C. Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- D. Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- E. Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Department of Natural Resources prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Department of Health regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Is our water system meeting other rules that govern our operations?

The Missouri Department of Natural Resources regulates our water system and requires us to test our water on a regular basis to ensure its safety. Our system has been assigned the identification number MO1010416 for the purposes of tracking our test results. Last year, we tested for a variety of contaminants. The detectable results of these tests are on the following pages of this report. Any violations of state requirements or standards will be further explained later in this report.

How might I become actively involved?

If you would like to observe the decision-making process that affect drinking water quality or if you have any further questions about your drinking water report, please call us at **816-628-4805** to inquire about scheduled meetings or contact persons.

Do I need to take any special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Special Lead and Copper Notice:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. KEARNEY is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800-426-4791) or at <http://water.epa.gov/drink/info/lead/index.cfm>.

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2013 Annual Water Quality Report

(Consumer Confidence Report) Contaminants Report

MO1010416

Definitions:

Population: 8200. This is the equivalent residential population served including non-bill paying customers.

MCLG: Maximum Contaminant Level Goal, or the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MCL: Maximum Contaminant Level, or the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

SMCL: Secondary Maximum Contaminant Level, or the secondary standards that are non-enforceable guidelines for contaminants and may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor or color) in drinking water. EPA recommends these standards but does not require water systems to comply

AL: Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow..

TT: Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.

90th percentile: For lead and Copper testing. 10% of test results are above this level and 90% are below this level.

Level Found: is the average of all test results for a particular contaminant.

Range of Detections: Shows the lowest and highest levels found during a testing period, if only one sample was taken, then this number equals the Highest Value.

MRLDG: Maximum Residual Disinfectant Level Goal, or the level of a drinking water disinfectant below which there is no known or expected risk to health.

MRDL: Maximum Residual Disinfectant Level, or the highest level of a disinfectant allowed in drinking water.

RAA: Running Annual Average, or the average of sample analytical results for samples taken during the previous four calendar quarters.

LRAA: Locational Running Annual Average, or the locational average of sample analytical results for samples taken during the previous four calendar quarters.

Abbreviations:

TTHM: Total Trihalomethanes (chloroform, bromodichloromethane, dibromochloromethane, and bromoform) as a group.

HAA5: Haloacetic Acids (mono-, di- and tri-chloroacetic acid, and mono- and di-bromoacetic acid) as a group.

ppb: parts per billion or micrograms per liter.

ppm: parts per million or milligrams per liter.

n/a: not applicable.

NTU: Nephelometric Turbidity Unit, used to measure cloudiness in drinking water.

MFL: million fibers per liter, used to measure asbestos concentration.

nd: not detectable at testing limits.

The state has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Records with a sample year more than one year old are still considered representative.

Regulated Contaminants

Regulated Contaminants	Collection Date	Highest Value	Range (low – high)	Unit	MCL	MCLG	Typical Source
BARIUM	3/12/2013	0.0804	0.0804	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
CHROMIUM	3/12/2013	3.64	3.64	ppb	100	100	Discharge from steel and pulp mills
FLUORIDE	3/12/2013	0.62	0.62	ppm	4	4	Natural deposits; Water additive which promotes strong teeth
NITRATE-NITRITE	11/6/2013	0.038	0.038	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Disinfection Byproducts	Sample Point	Monitoring Period	Highest LRAA	Range (low/high)	Unit	MCL	MCLG	Typical Source
(HAA5)	DBPDUAL-01	2013	20	19.5	ppb	60	0	Byproduct of drinking water disinfection
(HAA5)	DBPDUAL-02	2013	26	26.4	ppb	60	0	Byproduct of drinking water disinfection
TTHM	DBPDUAL-01	2013	53	52.5	ppb	80	0	Byproduct of drinking water disinfection
TTHM	DBPDUAL-02	2013	16	15.6	ppb	80	0	Byproduct of drinking water disinfection

Lead and Copper	Date	90th Percentile	Range (low – high)	Unit	AL	Sites Over AL	Typical Source
COPPER	2010 - 2012	0.124	0.00187 - 0.323	ppm	1.3	0	Corrosion of household plumbing systems
LEAD	2010 - 2012	3.15	1.97 - 7.27	ppb	15	0	Corrosion of household plumbing systems

Microbiological	Result	MCL	MCLG	Typical Source
No Detected Results were Found in the Calendar Year of 2013				

Violations and Health Effects Information

During the 2013 calendar year, we had the below noted violation(s) of drinking water regulations.

Compliance Period	Analyte	Type
07/01/2013	CONSUMER CONFIDENCE RULE	CCR REPORT

Reseller Contaminants

Regulated Contaminants	Collection Date	Water System	Highest Value	Range (low – high)	Unit	MCL	MCLG	Typical Source
ATRAZINE	4/21/2013	KANSAS CITY	2.1	0 - 2.1	ppb	3	3	Runoff from herbicide used on row crops
BARIUM	6/30/2013	KANSAS CITY	0.024	0.006 - 0.024	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
CHROMIUM	12/31/2013	KANSAS CITY	4	1.92 - 4	ppb	100	100	Discharge from steel and pulp mills
CYANIDE	4/19/2013	KANSAS CITY	13	0 - 13	ppb	200	200	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
FLUORIDE	10/18/2013	KANSAS CITY	1.96	0.138 - 1.96	ppm	4	4	Natural deposits; Water additive which promotes strong teeth
NITRATE-NITRITE	6/7/2013	KANSAS CITY	7.46	0 - 7.46	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
SELENIUM	7/31/2013	KANSAS CITY	2.23	0 - 2.23	ppb	50	50	Erosion of natural deposits

Wednesday, March 26, 2014

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Reseller Contaminants (Continued)

Disinfection Byproducts	Monitoring Period	Water System	Highest LRAA	Range (low - high)	Unit	MCL	MCLG	Typical Source
(HAA5)	2013	KANSAS CITY	20	6.6 - 35.5	ppb	60	0	Byproduct of drinking water disinfection
TTHM	2013	KANSAS CITY	20	2.1 - 48.9	ppb	80	0	Byproduct of drinking water disinfection

Reseller Violations and Health Effects Information

During the 2013 calendar year, the water system(s) that we purchase water from had the below noted violation(s) of drinking water regulations.

Water System	Type	Category	Analyte	Compliance Period
No Violations Occurred in the Calendar Year of 2013				

Optional Monitoring (not required by EPA)

Optional Contaminants

Monitoring is not required for optional contaminants.

Secondary Contaminants	Collection Date	Your Water System Highest Value	Range (low - high)	Unit	SMCL
ALKALINITY, CaCO3 STABILITY	3/12/2013	152	152	MG/L	
ALUMINUM	3/12/2013	0.146	0.146	MG/L	0.05
CALCIUM	3/12/2013	22	22	MG/L	
CHLORIDE	3/4/2010	27.4	27.4	MG/L	250
HARDNESS, CARBONATE	3/12/2013	121	121	MG/L	
IRON	3/12/2013	0.0452	0.0452	MG/L	0.3
MAGNESIUM	3/12/2013	16	16	MG/L	
MANGANESE	3/12/2013	0.0029	0.0029	MG/L	0.05
NICKEL	3/12/2013	0.00101	0.00101	MG/L	0.1
PH	3/12/2013	8.69	8.69	PH	8.5
POTASSIUM	3/12/2013	1.77	1.77	MG/L	
SODIUM	3/12/2013	18.4	18.4	MG/L	
SULFATE	3/12/2013	45.3	45.3	MG/L	250
TDS	3/12/2013	214	214	MG/L	500
ZINC	3/12/2013	0.0112	0.0112	MG/L	5

Reseller Secondary Contaminants	Collection Date	Water System	Highest Value	Range (low - high)	Unit	SMCL
ALKALINITY, PHENOLPHTHALEIN	12/7/2011	KANSAS CITY	45	8 - 45	MG/L	
ALKALINITY, TOTAL	12/29/2013	KANSAS CITY	232	20 - 232	MG/L	
BORON, TOTAL	9/30/2013	KANSAS CITY	0.09	0.031 - 0.09	MG/L	
BROMIDE	1/4/2013	KANSAS CITY	11	0 - 11	MG/L	0.05
CALCIUM	7/31/2013	KANSAS CITY	39	31.9 - 39	MG/L	
CHLORIDE	3/18/2013	KANSAS CITY	38.5	11.5 - 38.5	MG/L	250
COLOR	3/21/2013	KANSAS CITY	9	1 - 9	ADMI U	15
HARDNESS, TOTAL (AS CaCO3)	5/2/2011	KANSAS CITY	186	88 - 186	MG/L	
IRON	12/2/2013	KANSAS CITY	0.031	0.004 - 0.031	MG/L	0.3
MAGNESIUM	8/31/2013	KANSAS CITY	6.55	3.23 - 6.55	MG/L	
MANGANESE	7/31/2013	KANSAS CITY	0.002	0 - 0.002	MG/L	0.05
METOLACHLOR	6/23/2013	KANSAS CITY	0.9	0 - 0.9	ppb	
ODOR	11/29/2013	KANSAS CITY	6	1 - 6	TON	3
PH	10/2/2013	KANSAS CITY	10.3	6.8 - 10.3	SU	8.5
PHENOLS	3/22/2013	KANSAS CITY	0.009	0 - 0.009	MG/L	
POTASSIUM	10/31/2013	KANSAS CITY	7.36	5.62 - 7.36	MG/L	
RESIDUAL CHLORINE	9/1/2011	KANSAS CITY	2.57	1.53 - 2.57	MG/L	
SILICA	2/28/2013	KANSAS CITY	4.57	2.56 - 4.57	MG/L	
SODIUM	9/30/2013	KANSAS CITY	81.3	35.3 - 81.3	MG/L	
SULFATE	9/13/2013	KANSAS CITY	228	54.2 - 228	MG/L	250
TDS	10/9/2013	KANSAS CITY	480	180 - 480	MG/L	500
TESTOSTERONE	8/21/2013	KANSAS CITY	0.0014	0 - 0.0014	UG/L	
TOTAL CHLORINE	1/14/2013	KANSAS CITY	3.07	1.47 - 3.07	MG/L	
ZINC	12/31/2013	KANSAS CITY	0.006	0.002 - 0.006	MG/L	5

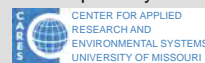
Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor or color) in drinking water. EPA recommends these standards but does not require water systems to comply.

Kearney

PWSS No. 1010416

3 Wells, Clay County

Prepared by:

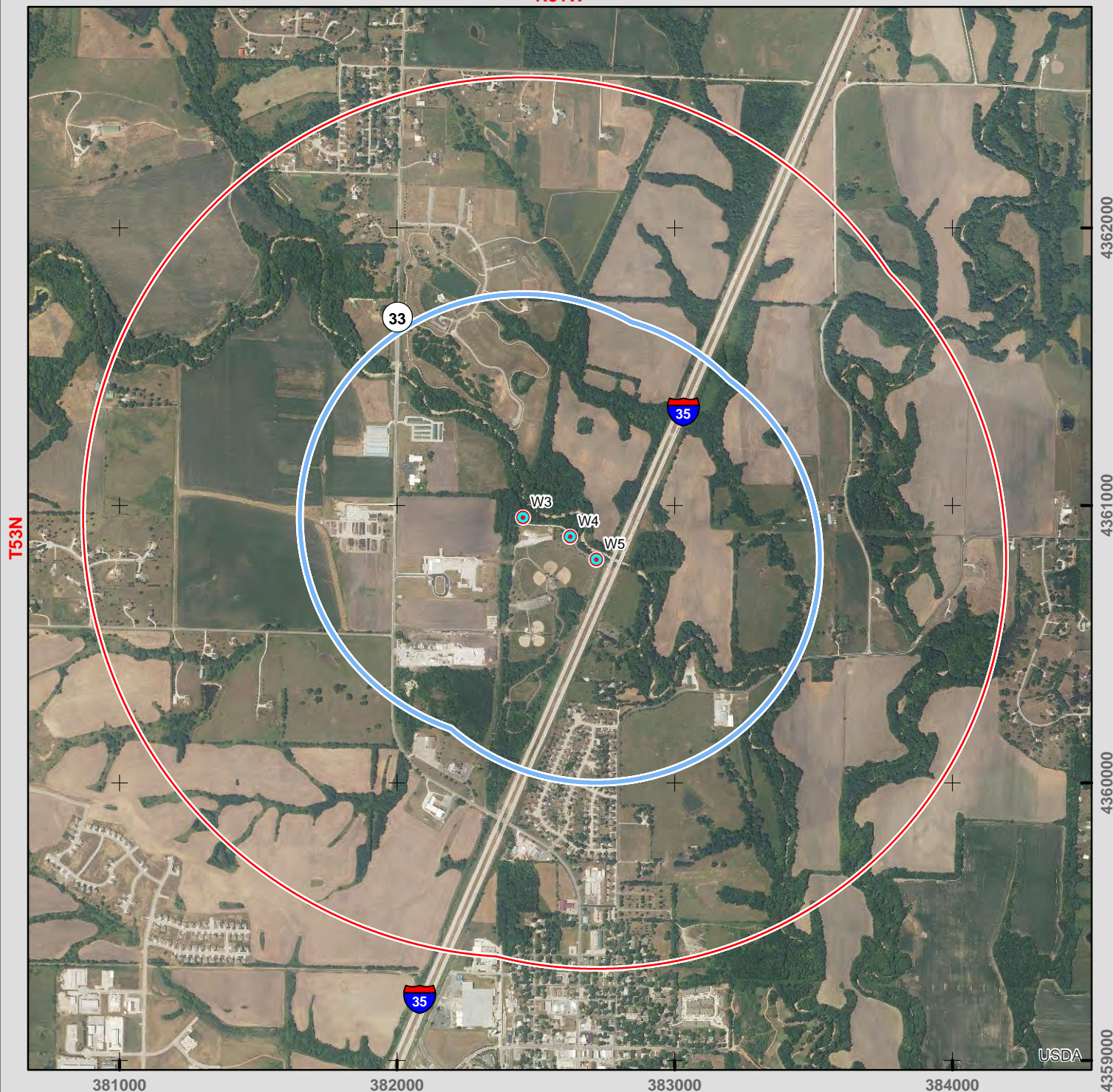


Map Update: Jun 06, 2014



Missouri Department of
Natural Resources

R31W



Well System

- System Well

SWAP Delineation Boundary

- 20-year time of travel
- Half-mile buffer



SWAP - Source Water Assessment Plan --
<http://drinkingwater.missouri.edu/swap/>
Aerial photos: USDA National Agriculture Inventory
Program (NAIP), 2012.



Feet

0 1,600 3,200

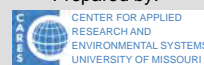
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PWSS No. 1010416

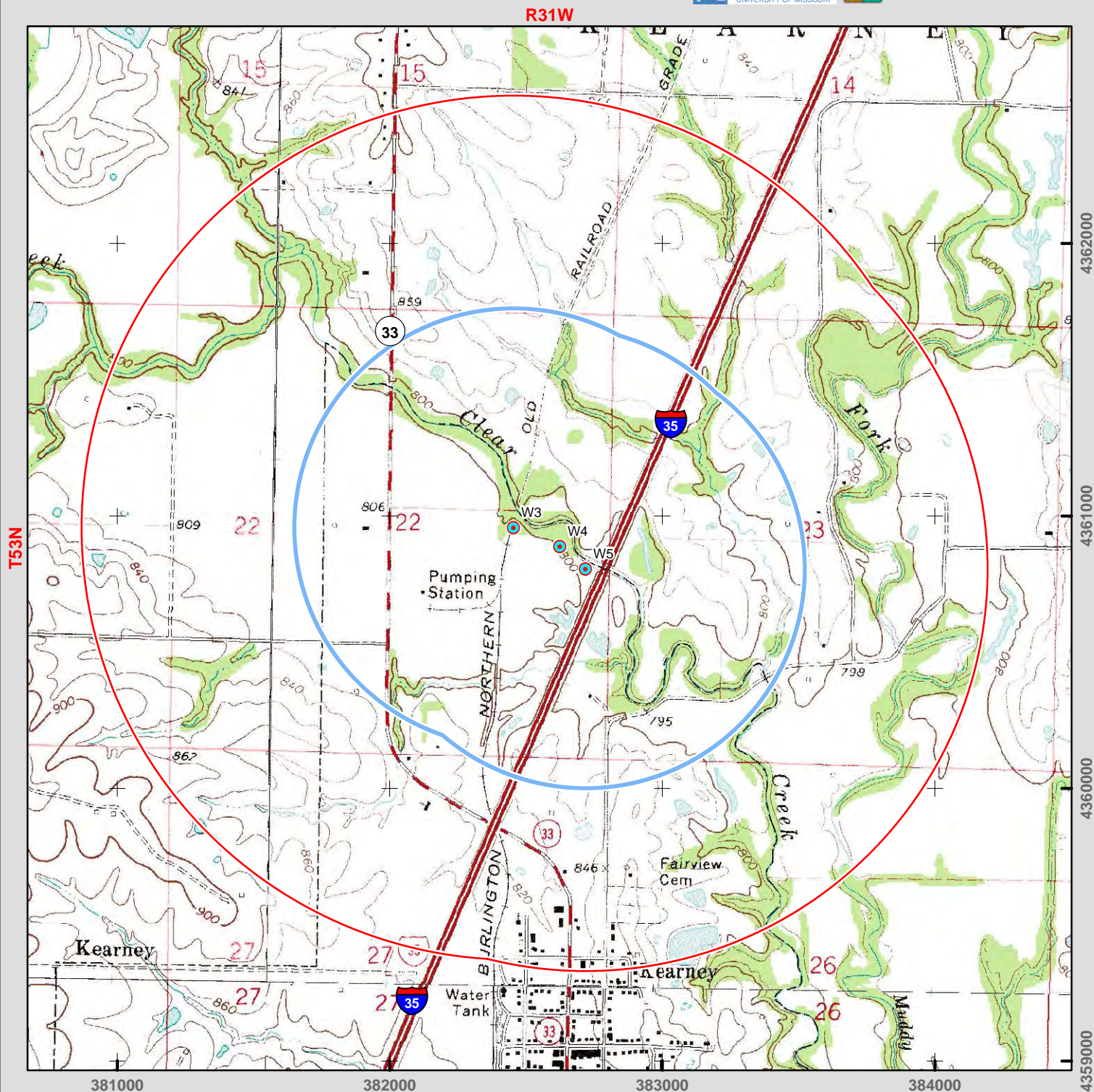
3 Wells, Clay County

Prepared by:



Map Update: Jun 06, 2014

Missouri Department of
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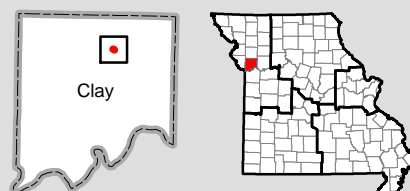


Well System

- System Well

SWAP Delineation Boundary

- 20-year time of travel
- Half-mile buffer



Feet

0 1,600 3,200

SWAP - Source Water Assessment Plan --
<http://drinkingwater.missouri.edu/swap/>
For basemap symbols, see the U.S. Geological Survey
(USGS) publication: Topographic Map Symbols.

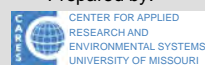
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Well #1 (W3)

PWSS No. 1010416, Well 1 of 3

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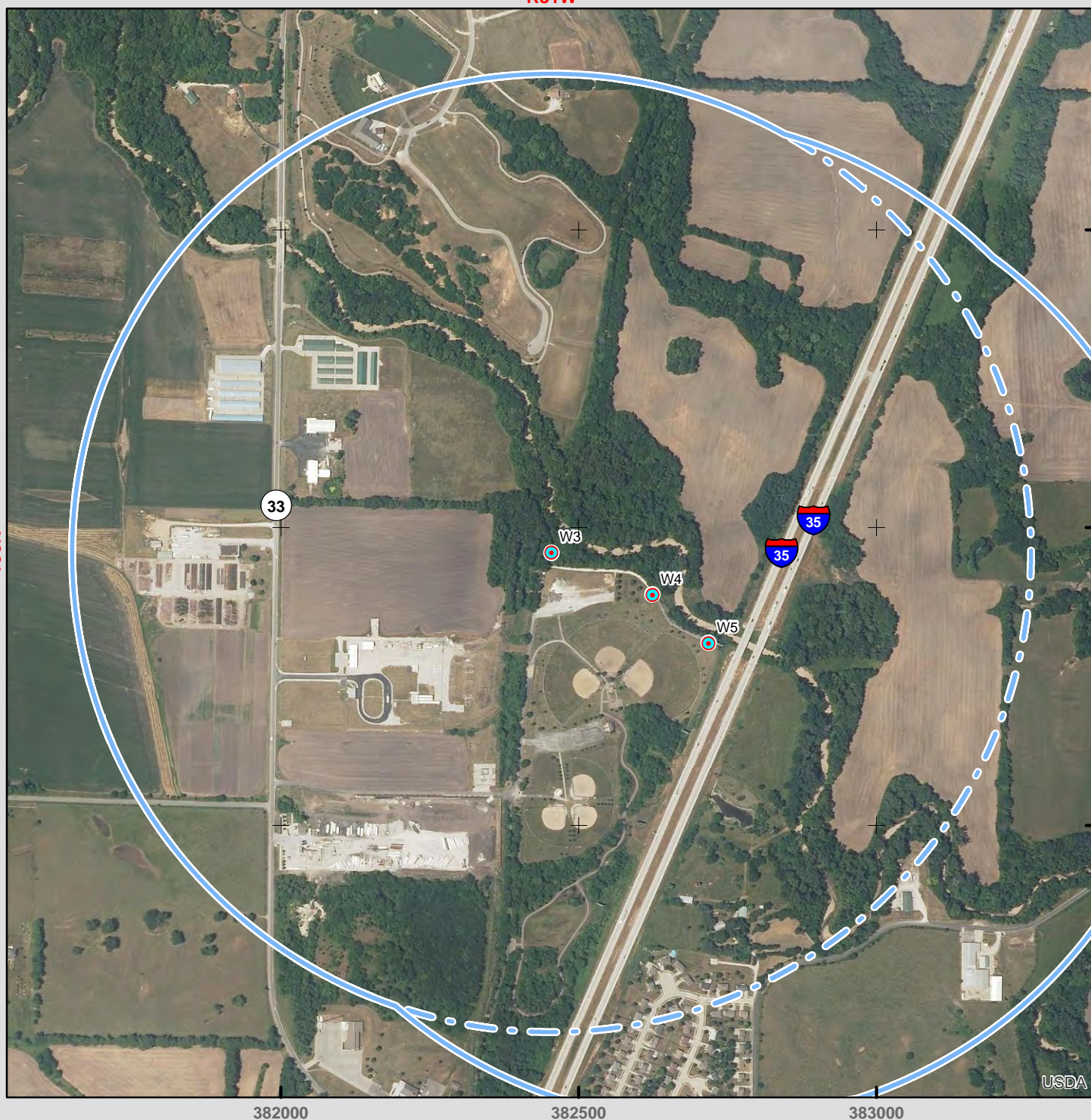


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Missouri Department of
Natural Resources

R31W

T53N



Well System

- System Well

SWAP Delineation Boundary

- 20-year time of travel
- Half-mile buffer

SWAP boundaries for individual wells indicated by dashed line.

SWAP - Source Water Assessment Plan --
<http://drinkingwater.missouri.edu/swap/>
Aerial photos: USDA National Agriculture Inventory Program (NAIP), 2012.



0 790 1,580

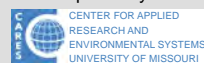
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Well #2 (W4)

PWSS No. 1010416, Well 2 of 3

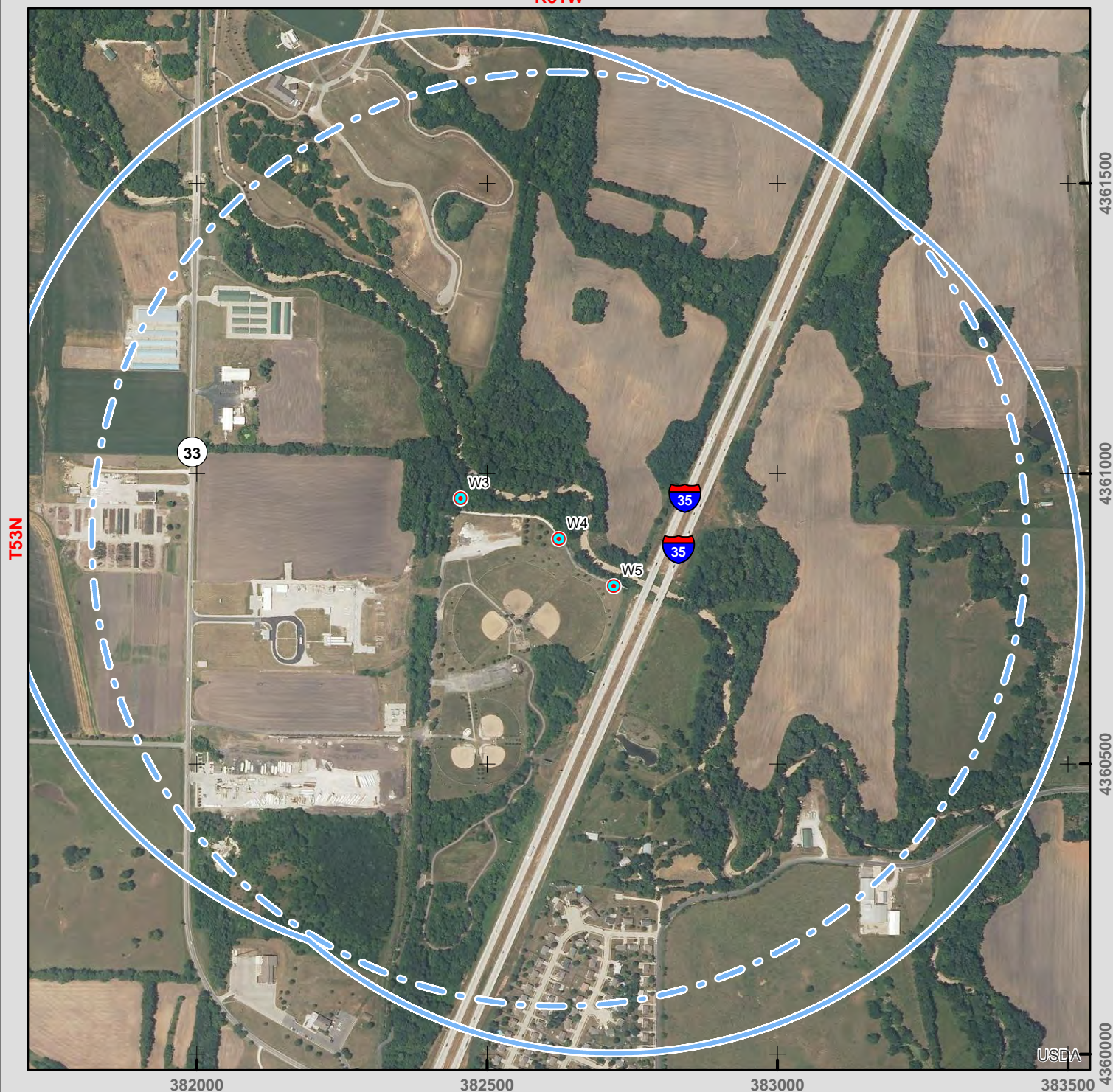
Prepared by:



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Missouri Department of
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R31W



Well System

- System Well

SWAP Delineation Boundary

- 20-year time of travel
- Half-mile buffer

SWAP boundaries for individual wells indicated by dashed line.

SWAP - Source Water Assessment Plan --
<http://drinkingwater.missouri.edu/swap/>
Aerial photos: USDA National Agriculture Inventory Program (NAIP), 2012.



0 790 1,580

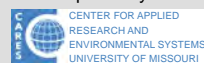
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Well #3 (W5)

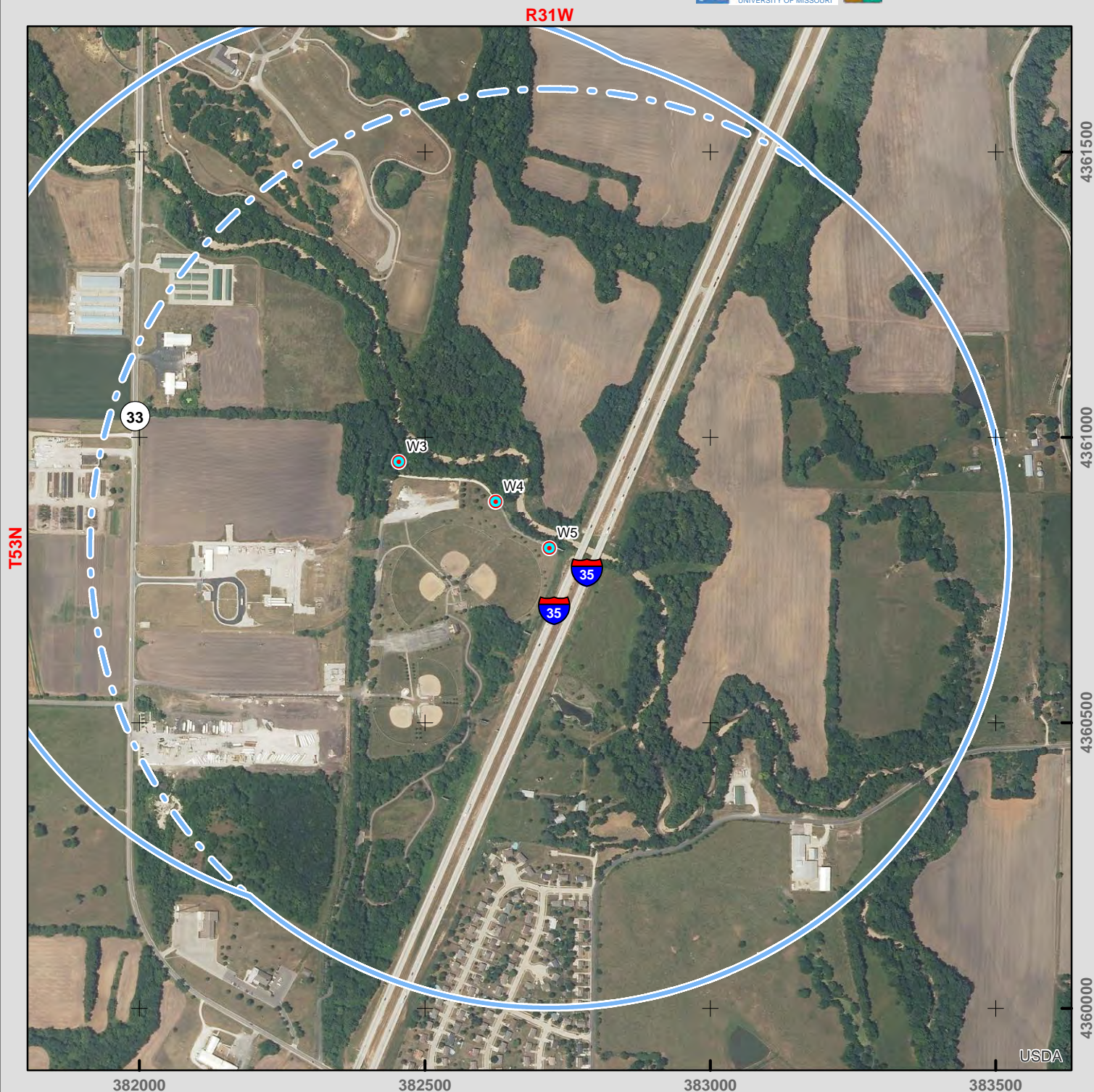
PWSS No. 1010416, Well 3 of 3

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Well System

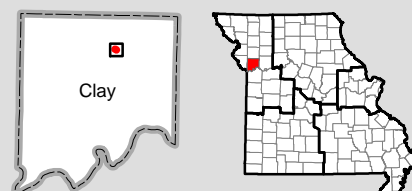
- System Well

SWAP Delineation Boundary

- 20-year time of travel
- Half-mile buffer

SWAP boundaries for individual wells indicated by dashed line.

SWAP - Source Water Assessment Plan --
<http://drinkingwater.missouri.edu/swap/>
Aerial photos: USDA National Agriculture Inventory Program (NAIP), 2012.



0 790 1,580
Feet

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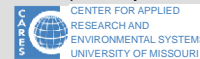
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PWSS No. 1010416

Clay County

3 wells

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Sheet Update: Jun 09, 2014



Missouri Department of
Natural Resources

Well Number	W3	W4	W5
Extended PWS #	1010416103	1010416104	1010416105
Local Well Name	Well #1	Well #2	Well #3
Well ID #	11656	11657	11655
DGLS ID #			
Facility Type	City	City	City
Status	Active	Active	Active
Latitude	39.39011	39.3895	39.38878
Longitude	-94.36497	-94.36299	-94.36188
Location Method	DRG/MAP	DRG/MAP	DRG/MAP
Method Accuracy (ft)	33	33	33
USGS 7.5 Quadrangle	Holt	Holt	Holt
County	Clay	Clay	Clay
MoDNR Region	Kansas City	Kansas City	Kansas City
Date Drilled (year)	1971	1986	1990
Material (C/U)	Unconsolidated	Unconsolidated	Unconsolidated
Base of Casing Formation	Glacial Deposits	Glacial Deposits	Glacial Deposits
Total Depth Formation	Glacial Deposits	Glacial Deposits	Glacial Deposits
Total Depth	84	79	102
Ground Elevation (ft)	805	805	805
Top Seal			Cement Grout
Bottom Seal			Gravel Pack
Casing Depth (ft)	69	59	81
Casing Size (in)	12	12	12
Casing Type	Steel	Steel	Steel
Elev. of Casing Top (ft)			
Outer Casing Depth (ft)			20
Outer Casing Size (in)			30
Screen Length (ft)	20	20	21
Screen Size (in)			12
Static Water Level (ft)	65	57	80
Well Yield (gpm)	185	185	185
Head (ft)	160	174	190
Draw Down (ft)	4	4	5
Pump Test Date (year)	1993	1993	1993
Pump Type	Vertical Turbine	Vertical Turbine	Vertical Turbine
Pump Manufacturer			
Pump Depth (ft)	60	60	70
Pump Capacity (gpm)	350	350	350
Pump Meter (Y/N)			
VOC Detection (Y/N)	N	N	N
Nitrate Detection (Y/N)	N	N	N
Chlorination (Y/N)	Y	Y	Y
Filtration (Y/N)	Y	Y	Y
GWUDISW (Y/N)			
Surface Drainage			
State Approved(Y/N)			
Date Abandoned (year)			
Date Plugged (year)			

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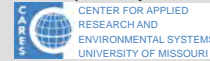
Kearney

PWSS No. 1010416

Clay County

4 potential contaminant sources

Prepared by:



Sheet Update: Jun 09, 2014



Missouri Department of
Natural Resources

Map C.No.	CARES ID	Site Name	Type	Location Code	Accuracy Code	Method Code	Database Code
C1	138180	VERTEX PLASTICS INC.	Tris97 Entry	BL	33 ft	I2	TRI
C2	382657	Marshall Evergreens Nursery	Garden and/or nursery	CF	33 ft	I2	CARES
C3	382658		Electric substation	CF	33 ft	I2	CARES
C4	382659		Electric substation	CF	33 ft	I2	CARES

Method Codes				Location Codes				Accuracy Codes	
Code	Address Matching (Geocoding)	Code	Global Positioning System	Code	Other	BL	Building	Code	Metric
A2	Block/Group	G1	Static Mode	P1	Land Survey	CF	Center of Facility	m	Meters
A3	Street Centerline	G2	Kinematic Mode	S2	Quarter Description	IN	Intersection	km	Kilometers
A4	Nearest Street Intersection	G3	Differential Post Processing	UN	Unknown	LS	Lagoon or Pond		English
A5	Primary Street Name	G4	Precise Positioning Service			MG	Main Access Point (Gate)	ft	Feet
A6	Digitization	G5	Signal Averaging			MA	Main Office	yd	Yards
AO	Other Address Matching	G6	Real Time Differential Processing			OT	Other	mi	Miles
Z1	ZIP Code Centroid		Interpolation			PL	Pile	UN	Unknown
	Census - 1990	I1	Topo Map			RD	Road	NF	Site not found at
C1	Block Centroid	I2	Aerial Photography (DOQQ)			TK	Tank, Standpipe, or Tower		database position
C2	Block/Group Centroid	I3	Satellite Imagery			WL	Well	NV	Site position not
C3	Tract Centroid					UN	Unknown		verified

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Kearney

PWSS No. 1010416

Contaminant Summary Sheet

4 potential contaminant sources

Prepared by:



Sheet Update: Jun 09, 2014



Missouri Department of
Natural Resources

4 Potential Contaminant Sources in the Listed Databases:

AFS (EPA AIRS Facility Sites)	Perchlo (MoDNR Perchlorate Sites in Missouri)
APCP (MoDNR Air Pollution Control Program Sites)	Pest Ap (MDA Licensed Pesticide Applicators)
APF (MoDNR Active Permitted Landfills & Transfer Stations)	RCRIS (EPA Resource Conservation and Recovery Information System)
CERCLIS (EPA CERCLIS)	Silos (USGS Minuteman II Missile Silos)
Chemcov (VA Selected Chemical Sites)	SMARS (MoDNR Superfund Management and Registry System)
Dealcov (MDA Pesticide Dealer Locations)	Tanks (MoDNR Petroleum Tank Database)
Dioxin (MoDNR Confirmed Dioxin List)	Tier 2 (MERC Tier II Reports)
Grain B (USDA Former Grain Bin Sites)	Tire D (MoDNR Resolved and Unresolved Waste Tire Dumps)
HW Gen (MoDNR Hazardous Waste Generators)	1 TRI (EPA Toxic Release Inventory)
HW Tran (MoDNR Hazardous Waste Transporters)	VCP (MoDNR Voluntary Cleanup Program Sites)
LUST (MoDNR Leaking Underground Storage Tanks)	WQIS (MoDNR Water Quality Information System)
MoDOT (MoDOT Highway Maintenance Facilities)	
PADS (EPA PCB Activity Data Base System)	3 SWIP Field Inventory (see below)

3 Potential Contaminant Sources in the SWIP Field Inventory:

0 Airport or abandoned airfield	0 Machine or metalworking shop
0 Animal feedlot	0 Manufacturing (general)
0 Apartments and condominiums	0 Material stockpile (industrial)
0 Asphalt plant	0 Medical institution
0 Auto repair shop	0 Metal production facility
0 Automotive dealership	0 Mining operation
0 Barber and beauty shop	0 Other
0 Boat yard and marina	0 Paint store
0 CAFO	0 Park land
0 Campground	0 Parking lot
0 Car wash	0 Petroleum production or storage
0 Cement Plant	0 Pharmacies
0 Cemetery	0 Photography shop or processing lab
0 Communication equipment mfg	0 Pit toilet
0 Country club	0 Plastic material and synthetic mfg
0 Dry cleaner	0 Print shop
0 Dumping and/or burning site	0 Railroad yard
0 Electric equipment mfg or storage	0 Recycling/reduction facility
2 Electric substation	0 Research lab
0 Farm machinery storage	0 Restaurant
0 Feed/Fertilizer/Co-op	0 Sawdust pile
0 Fire station	0 School
0 Funeral service and crematory	0 Sports and hobby shop
0 Furniture manufacturer	0 Swimming pool
0 Furniture repair or finishing shop	0 Tailing pond
1 Garden and/or nursery	0 Tank (above-ground fuel)
0 Garden, nursery, and/or florist	0 Tank (other)
0 Gasoline service station	0 Tank (pesticide)
0 Golf courses	0 Tank (underground fuel)
0 Government office	0 Trucking terminal
0 Grain bin	0 Veterinary service
0 Hardware and lumber store	0 Wastewater treatment facility
0 Hazardous waste (Federal facility)	0 Well (abandoned)
0 Highway maintenance facility	0 Well (domestic)
0 Jewelry or metal plating shop	0 Well (irrigation)
0 Junk yard or salvage yard	0 Well (livestock)
0 Lagoon (commercial)	0 Well (monitoring)
0 Lagoon (industrial)	0 Well (public water supply)
0 Lagoon (municipal)	0 Well (unknown)
0 Lagoon (residential)	
0 Landfill (municipal)	
0 Laundromat	
0 Livestock auction	

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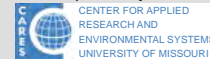
Kearney

PWSS No. 1010416

Susceptibility Determination Sheet

3 wells

Prepared by:



Sheet Update: Mar 14, 2014



Missouri Department of
Natural Resources

The Missouri Department of Natural Resources (MoDNR) has assembled this information to assess the susceptibility of drinking water sources to contamination. There are many unforeseen and unpredictable factors that may cause a source to be contaminated. MoDNR routinely monitors all public supplies to ensure public health is protected. Public water systems and local communities are encouraged to take all measures possible to reduce the susceptibility of their drinking water source to chemical contamination. For more information, call 1-800-361-4827.

Not Susceptible	Moderately Susceptible	Highly Susceptible	Incomplete Data
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A system is highly susceptible because of construction deficiencies if:

A well was not constructed according to plans approved by MoDNR-PDWB,				X
A well was not cased to a depth approved by MoDNR,				X
A well casing is not of sufficient weight,	X			
A well is not sufficiently sealed (grouted) around the casing, or A well has developed holes in the casing or other flaws that compromise its integrity.				X

A system is highly susceptible due to direct influence of surface water if:

A well has tested positive for surface water indicators such as algae or high turbidity.				X
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A system is highly susceptible to surface contaminants if:

A well casing does not extend 12 inches above the well house floor, or 18 inches above the ground surface,				X
A well casing does not extend four feet above the 100-year flood level, or four feet above the highest known flood elevation,				X
A well is not provided with a properly screened vent, or				X
All openings in a well casing are not properly sealed.				X

A system is highly susceptible based on detection histories if:

Volatile Organic Chemicals (VOCs) have been detected in a well,	X			
Synthetic Organic Chemicals (SOCs) have been detected in a well,				X
Inorganic Chemicals (IOCs) have been detected in a well above naturally occurring levels,				X
Nitrates have been detected at or above one-half the MCL,	X			
Bacteria has been consistently detected in a well, or				X
Viruses or microbiological contaminants are detected in a well.				X

A system is highly susceptible to weather, vandalism, and sabotage if:

A well is not in a locked well house of adequate construction.				X (1)
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A system is moderately susceptible due to local geology if:

A producing aquifer is less than 100 feet below the surface,		X (2)		
A producing aquifer has conduit flow conditions due to surficial karst topography,				X
A producing aquifer is not overlain by an impermeable confining layer,				X
A producing aquifer is overlain by a conductive ($>5 \times 10^{-4}$) formation (including soil), or				X
A producing aquifer is confined, but there are open wells nearby penetrating that layer.				X

A system is moderately susceptible to contaminants if:

Any contaminants listed in Appendix F-a are found in the source water area,		X (3)		
Septic systems are present in the source water area,				X
A well is indirectly connected to a surface water body,				X
A submersible well pump cannot be ruled out from containing PCBs or PHAs, or				X
There is a high density of transportation corridors in the source water area.				X

A system is highly susceptible to contamination if:

Any contaminant sites identified in the source water area are known to have contaminated groundwater that may migrate toward a well.				X
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(1) This system was not assessed to determine if adequate security devices such as padlocks, gates, and lighting are in place to deter vandals and saboteurs. All water systems should have this type of protection in place.

(2) A well (or wells) serving this system has been determined to be susceptible due to geologic conditions. The water system and the wellhead protection team should take extra care to ensure that all potential contaminants in the source water area are handled properly to avoid contamination of the drinking water supply.

(3) A well (or wells) serving this system has been determined to be susceptible due to the presence of potential contaminant sources. The water system and the wellhead protection team should take extra care to ensure that all potential contaminants in the source water area are handled properly to avoid contamination of the drinking water supply.