



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
**NOTICE OF VIOLATION**

VIOLATION NUMBER
16091SW

DATE AND TIME ISSUED  
**April 6, 2015**

SOURCE (NAME, ADDRESS, PERMIT NUMBER, LOCATION)  
**Chelsea Rose Subdivision**

**Lake Road F-125B, Sunrise Beach in Camden County**

**Missouri State Operating Permit number MO0111104**

**SE 1/4, SE 1/4, Sec. 13, T39N, R17W River Reach 10290109-0401**

MAILING ADDRESS <b>P.O. Box 506</b>	CITY <b>Clinton</b>	STATE <b>MO</b>	ZIP CODE <b>64735</b>
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NAME OF OWNER OR MANAGER <b>Osage Water Company</b>	TITLE OF OWNER OR MANAGER <b>Owner</b>
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LAW, REGULATION OR PERMIT VIOLATED  
**Missouri Clean Water Law Section 644.076.1 and 644.051.1(3), RSMo.**

NATURE OF VIOLATION	DATE(S):	TIME(S):
<p><b>Permittee failed to comply with effluent limits contained in Part "A" of the Missouri State Operating Permit number MO0111104. Permittee exceeded effluent limitations for Ammonia as N for the fourth quarter, October through December 2014.</b></p>		

SIGNATURE (PERSON RECEIVING NOTICE) <b>Sent Via US Mail</b>	SIGNATURE (PERSON ISSUING NOTICE) <b>Lana Cypret</b> <i>Lana Cypret</i>
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TITLE OR POSITION	TITLE OR POSITION <b>Technical Assistant / SWRO</b>
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Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

# DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

April 6, 2015

NOTICE OF VIOLATION 16091SW  
CERTIFIED MAIL # 7014 0150 0001 9539 8599  
RETURN RECEIPT REQUESTED

Osage Water Company  
Chelsea Rose Subdivision  
P.O. Box 506  
Clinton, MO 64735

RE: MISSOURI STATE OPERATING PERMIT NUMBER MO0111104

Dear Permittee:

A review of your Discharge Monitoring Report(s) (DMR) for the monitoring period ending in **fourth quarter, October through December 2014** shows that the effluent limitations established in your Missouri State Operating Permit (MSOP) have been exceeded. A Notice of Violation (NOV) number **16091SW** is enclosed for exceedances listed below according to your Missouri State Operating Permit (MSOP) number MO0111104. The effluent limits and the values that have exceeded those effluent limits are listed below.

Outfall	Months	Parameter	Permit Limitations	Reported Values
001	10-12/14	Ammonia as N	4.6 mg/L monthly average	40.03 mg/L
			12.1 mg/L daily maximum	40.03 mg/L

An exceedance of the effluent limitations established in your permit is a violation of the Missouri Clean Water Law, Section 644.051.1(3) and 644.076.1, Clean Water Commission Regulation 10 CSR 20-7 and your MSOP. The facility is responsible for taking appropriate steps to eliminate the violation(s).

**Please provide a written response within 15 calendar days of receipt of this letter to the Department of Natural Resources (department) which explains the reason(s) for the non-compliance and what steps your operation has taken or will take to prevent a reoccurrence of the violation(s).** The facility will be considered in non-compliance with the violation(s) and our files will reflect the continued non-compliance until the documentation is submitted to this office. If you have already provided this information to the department, you may disregard this request.

Chelsea Rose Subdivision  
April 6, 2015  
Page 2

We appreciate your cooperation and immediate attention so that violations can be corrected. If you have questions please contact water pollution staff by calling 417-891-4300 or via mail at Missouri Department of Natural Resources, Southwest Regional Office, 2040 W. Woodland, Springfield, MO 65807-5912.

Sincerely,

SOUTHWEST REGIONAL OFFICE

A handwritten signature in black ink that reads "Cynthia S. Davies". The signature is written in a cursive style with a large initial "C".

Cynthia S. Davies  
Regional Director

CSD/lck

Enclosure

029.wpcp.ChelseaRoseSubd.mo0111104.x.2015.04.06.fy15.novdmr.16091sw.lgc

RECEIVED

JUL 22 2016

DEQ/SWRO

# REPORT OF LOW WATER PRESSURE

Missouri Public Drinking Water Regulation 10CSR60-7.010(2) requires that public water systems notify the Department within 48 hours of a failure to comply with any regulation or monitoring requirement. Since the regulation 10CSR60-4.080(9) requires all public water systems to maintain a minimum pressure of 20 psi, all public water systems must notify the Department when pressures in their system fall below 20 psi.

Use this form to report low pressure events directly to the Department Regional Office in your area.

System Name	Chelsea Rose Subdivision	PWS ID#	3031244	County	Camden
Date Reported	7/22/16	Reported By	Krystal Ryan		
Describe Nature of Problem					
There was a line break our operators went out to repair. There was some contamination so we issued a boil order. A sample has been taken after the system was chlorinated.					
Lowest Pressure Reading	0	psi	Duration of Low Pressure	5 Hrs 30 min	
Date & Time of Problem onset	7/21/16	8am	Number of services Affected	33	
Location and Area Affected					
All of Chelsea Rose Subdivision					

Corrective Action Taken					
Lake Ozark Water & Sewer has gone out to chlorinate the system and flush through the weekend. A boil order was issued and customers were notified. A sample will be taken a second time to see if the water is clean.					

Date and Time Customers Notified	7/21/16 @ 1600 & 7/22/16 @ 1500				
Method of Notification	A phone call was placed to each customer in Chelsea Rose.				

If notice was done by hand delivery attach a copy of the notice to this sheet.

You may Mail or fax a completed copy of this form to the Missouri Department of Natural Resources Southwest Regional Office; 2040 West Woodland; Springfield, MO 65807. Telephone 417-891-4300; Fax 417-891-4399.

029. Admpt. Chelsea Rose Subd. no 3031244-X. 2016.07.22. f/17.X.X.rcvd

**MC DUFFEY LAB**

Missouri State Certified Drinking Water Laboratory

840 Thunder Mountain Road  
Camdenton, Mo. 65020Phone 573 346-2092  
Fax 573 346-4676

RECEIVED

JUL 22 2016

DEQ/SWRO

Lab Number: 00950

Report Date: July 22, 2016

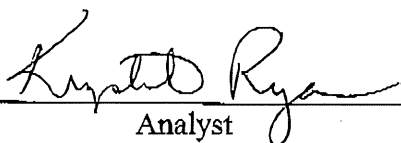
PWS NAME: Chelsea Rose Subdivision  
c/o LOWS: 840 Thunder Mtn. Rd.  
Camdenton,, MO 65020

PWS ID: MO3031244

COUNTY: Camden

Sample Date	Sample Type	Collection Point	Location ID	Lab Results	Chlorine	
					Total(mg/L)	Free(mg/L)
7/21/2016	Special	1725 Oak Bend Rd		P/P		

Signed: \_\_\_\_\_


  
Analyst

7/22/2016

Date

Analyses performed in accordance with approved methods described in the Standard Methods for the Examination of  
Water and Wastewater, 19th Edition

Schedule JC-S1



Missouri Department of dnr.mo.gov

**NATURAL RESOURCES**

Eric R. Greitens, Governor

Carol S. Comer, Director

April 19, 2018

Ms. Jill D. Olsen, Trustee  
Chelsea Rose Subdivision  
118 N Conistor Lane Suite B290  
Liberty, MO 64068

### UNSATISFACTORY FINDINGS

Dear Ms. Olsen:

Staff from the Missouri Department of Natural Resources (Department) conducted an inspection on April 2, 2018 of Chelsea Rose Subdivision public water system (system). The system operates under the public water system identification number MO3031244.

Compliance with Safe Drinking Water Law was evaluated. The enclosed report is being issued with Unsatisfactory Findings for the violations identified. Please refer to the enclosed report for details on findings and required actions. A written response is not required at this time because you have already provided a sufficient response to the unsatisfactory findings. Your actions show that you recognize our mutual goal in providing a quality of life for Missouri's citizens through environmental compliance. The Department appreciates your voluntary efforts to comply with the laws of Missouri and your continued efforts to work with us to improve protection of Missouri citizens and our natural resources.

If you have any questions or would like to schedule a time to meet with Department staff to discuss compliance requirements, please contact Ms. Sheila Yoder of my staff, by calling 417-891-4300, by email at [sheila.yoder@dnr.mo.gov](mailto:sheila.yoder@dnr.mo.gov), or via mail at Southwest Regional Office, 2040 West Woodland, Springfield, Missouri 65807-5912.

Sincerely,

SOUTHWEST REGIONAL OFFICE

Mark Rader, Chief  
Drinking Water Section

MDR/syl

Enclosure

c: Mr. Jim Busch, Public Service Commission  
Ms. Airin Haselwander, Well Installation Section  
Public Drinking Water Branch, Monitoring Section  
Mr. Tim Ripley, Operator/ Lake Ozark Water & Sewer

029.pdwp.ChelseaRoseSubdivision.x.mo3031244.2018.04.19.fy18.ins.x.sky.doc



### Carbon Copy Address Attachment

- Include information for each individual identified in the carbon copy line that is not a MDNR staff member in one of the groups below.
- All DEQ Program staff will receive documents via the exchange drive.
- All SWRO and other MDNR staff will receive documents via email.
- All Basecamp groups will receive documents via Basecamp (technical staff responsibility once final .pdf received). Note that technical staff copying a basecamp group will also carbon copy themselves.

#### Physical (mailing) Addresses:

Mr. Tim Ripley  
Lake Ozark Water & Sewer  
840 Thunder Mountain Road  
Camdenton, MO 65020

Mr. Jim Bush  
Public Service Commission  
P.O. Box 360  
Jefferson City, MO 65102-0360

#### Email Addresses: (for those that have indicated this is the preferred method of receipt)

Ms. Airin Haselwander, Well Installation Section  
Haselwander, Airin <Airin.Haselwander@dnr.mo.gov>

#### FAX Numbers: (for those that have indicated this is the preferred method of receipt)

**Missouri Department of Natural Resources**  
**Southwest Regional Office/Public Drinking Water Branch**  
**Report of Inspection**  
**Chelsea Rose Subdivision**  
**Camden County, Missouri**  
**Public Water System ID Number MO3031244**  
**April 19, 2018**

## **Introduction**

A routine inspection was made by the Missouri Department of Natural Resources (Department) of the community public water system serving Chelsea Rose Subdivision on April 2, 2018. The purpose of the inspection was to determine compliance with Missouri Safe Drinking Water Law and Regulations. The inspection reviewed all eight critical components applicable to the public water system.

The following people were present at the time of the inspection:

Chelsea Rose Subdivision

Mr. Tim Ripley, Operator

Missouri Department of Natural Resources

Ms. Sheila Yoder, Environmental Specialist

## **Facility Description and History**

The system serves 29 metered connections and seven unmetered connections year round in the subdivision and is supplied by a single state approved well. The system is part of a court ordered receivership for Osage Water Company Utilities (which filed bankruptcy in October 2017). The court originally appointed Attorney Gary Cover as receiver. Attorney Jill Olsen is now the Chapter 11 Trustee who contracts with Lake Ozark Water and Sewer to provide operational services. The system has operated without a permit to dispense water since its beginning.

Well #1 is severed from the water system but has not yet been properly ‘abandoned’; further information is included on the attached Abandoned Well Report. Well #2 was drilled in 1999 to a depth of 820 feet with 550 feet of six-inch steel casing. The submersible pump is 10 horsepower, rated at 60 gallons per minute and set at 399 feet. There is no treatment of the water. There is an 86-gallon champion bladder tank at well #2. There is a 500-gallon pressure tank in a small building between well #2 and well #1, but it was not in use at the time of the inspection.

The original construction plans from 1990 (#3495-90) specified a 6,600-gallon horizontal pressure tank. The project was delayed, the construction permit was reissued in November 1993 and again in December 1995, the last expiring December 1997. It was activated as a public water system in May 1998 as Chelsea Rose Subdivision-Osage Water Company (OWC). OWC was also issued a notice of violation at that time for construction of a community water system without approval and dispensing water to the public without a permit, after Department personnel observed the construction of water lines in April and May 1998 and 16 homes were being served by a single well that was constructed in 1996. In March 1999 a construction extension was requested, it was approved in April 1999. In June 1999 well #2 was drilled and pressure grout observed by the Department. Original construction plans showed two and three-inch PVC would be installed. The 1999 site plan showed two, four, and six-inch water lines on the map. A 500-gallon pressure tank was added sometime after the June 24, 2005 inspection (unless it was not disclosed) and the March 13, 2012 inspection; this tank was not part of any construction approval. A July 22, 2016 email regarding an *E. coli* boil advisory for the system noted the water and sewer lines were in the same trench. A June 2012 letter from



Mr. Gary Cover indicated the system is unable to conduct flushing in the system due to losing pressure due to lack of storage for the system. The Public Drinking Water Branch Enforcement issued a Notice of Violation in July 2014 for operating without a permit.

Since the last inspection on April 15, 2015 the master meter has been repaired or replaced, the system has filed for bankruptcy, and a Trustee has been appointed.

The system is located in the Lake of the Ozarks Watershed 10290109. The system was historically referred to as F-12 water due to its location on road F-12. It requires an operator properly certified at the DS-1 level. Mr. Tim Ripley is properly certified.

### **Discussion of Inspection and Observation**

I met with Mr. Ripley on April 2, 2018 at Chelsea Rose Subdivision; the inspection was conducted during normal business hours. Upon arrival I discussed the scope and the purpose of the inspection. I looked at the well and pressure tanks and took photos. Mr. Ripley said he had taken the 500-gallon tank off line for the winter because there is no heat or electric in that building, he said he was getting ready to put it back on line, and also said they had received no complaints on low pressure. The well was cycling frequently. I asked if there was a cross connection policy and Mr. Ripley said he wasn't aware of one. I looked at the system records and found the Primacy and Laboratory fees are up-to date, chemical and bacteriological samples were submitted as required.

We discussed that the emergency operation plan and procedures should be evaluated and updated. For more information please see the Model Emergency Operating Plan for Public Water Supplies located at <http://www.dnr.mo.gov/env/wpp/eop/index.html>.

The system has an abandoned well (#1) that has not been plugged properly as required by the Missouri Well Construction Rule. The rule requires that abandoned wells be disconnected from the distribution system and plugged to prevent contamination from entering the water-bearing formation. Our Well Installation Section will send you a letter with information on plugging the abandoned well. If you have questions regarding this requirement, please contact Ms. Airin Haselwander at 573-368-2196.

### **Sampling and Monitoring**

A sample was not collected during the time of the inspection due to weather conditions.

At the time of inspection there were no monitoring or maximum contaminant level violations during the last 24 months.

### **Engineering Assessment**

No engineering assessment was conducted at the time of this inspection.

### **Compliance Determination and Required Actions**

The facility is not in compliance with Missouri Safe Drinking Water Regulations based on observations made during the inspection.

### **Unsatisfactory Findings**

For all Unsatisfactory Findings listed below, a written response documenting actions taken to correct the violations is required by **May 21, 2018**.

1. The public water system does not have a Permit to Dispense Water to the Public as required by Safe Drinking Water Regulation 10 CSR 60-3.010(2)(A).

This system was referred to the Public Drinking Water Branch for enforcement previously; the ownership and receivership situation has hindered the issue. All public water systems must obtain a permit to dispense water to the public. There is no permit fee. A public water system must submit a permit to dispense application and must meet bacterial and chemical monitoring and maximum contaminant level requirements.

**REQUIRED ACTION:** Once the ownership issues have been resolved, complete and submit a new application for a permit to dispense and submit it with all required documentation, including a deed to the well property, to: Missouri Department of Natural Resources, Public Drinking Water Branch, Infrastructure, Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102, Phone 573-751-5331, Fax: 573-751-3110. For questions concerning any permit enforcement action, please contact Mr. Lance Dorsey with the Public Drinking Water Branch at P.O. Box 176, Jefferson City, MO, 65102; telephone 573-751-5331.

2. The public water system failed to construct the public water system in accordance with approved plans and specifications in violation of Safe Drinking Water Regulation 10 CSR 60-10.010(4). Specifically, the water system failed to construct the storage as proposed and approved by the Department's construction authorization #3495-90. The storage tank was not constructed as approved, small pressure tanks were installed instead. The hydropneumatic (pressure) tanks do not provide adequate storage volume. Plans and specs were also later submitted under review#53782-05 that included a 4,512-gallon ground storage tank and booster pumps but the proposal was voided by Department staff due to a lack of response.

All community public water systems must obtain written authorization (a construction permit) from the Department prior to construction, alteration, or extension of the water system. Any deviation from the approved plans and specifications affecting capacity, hydraulic conditions, operating units, the functioning of water treatment processes, or the quality of water to be delivered must be approved in writing before such changes are made. Revised plans and specifications shall be submitted to the Department for review and approval before any construction work affected by such changes is started.

The public water system shall submit two copies each of engineering report, plans, and specifications along with an application for a new or revised construction permit to the Missouri Department of Natural Resources, Public Drinking Water Branch, P.O. Box 176, Jefferson City, Missouri 65102, 573-751-5331, for construction/completion of the public water system in accordance with the previously-approved engineering report, plans, and specifications.

### **Recommendations**

1. The public water system has not established a cross-connection control program.

The public water system should establish a written cross-connection control program to prevent contamination from being introduced into the system from back-pressure or back-siphonage. This cross-connection control program might include a cross-connection ordinance for cities and towns, a cross-connection clause in the user agreement for private utilities, and an inspection of all potential cross-connection sources such as car washes, school laboratories, beverage bottling plants, sewage treatment plants, facilities with boilers or fire sprinkler systems, mortuaries, irrigation systems, hospitals, and industrial manufacturing plants.

Whenever an unprotected cross-connection is discovered, it must be corrected by the customer installing a Department-approved air gap or backflow prevention device. Air gaps and backflow prevention devices must be tested annually by a certified tester, and results of these tests must be kept in the public water system records for a period of five years and made available to the Department inspector during inspections.

The public water system should establish a cross-connection control program. An example cross-connection control plan and a backflow prevention fact sheet is enclosed. The public water system must ensure all cross-connections have an approved back-flow prevention device and these devices are tested annually. If a back-flow prevention device has not been installed at any connection where there is a cross-connection this can be considered a Significant Deficiency.

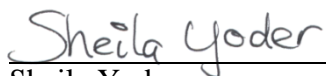
2. The pump discharge piping is not equipped with an aboveground check valve.

A well pump discharge check valve is needed to prevent water from the storage tank and distribution system from entering the well. Even wells with submersible pumps that have a check valve in the piping in the well need an above ground pump discharge piping check valve as a safety precaution. The only exception is a pump that discharges directly into the top of an unpressurized storage tank. The Department recommends a check valve should be installed between the well and storage tank.

### Signatures

SUBMITTED BY:

REVIEWED BY:



Sheila Yoder  
Environmental Specialist  
Southwest Regional Office



Kristen Pattinson, Chief  
Drinking Water Compliance Unit  
Southwest Regional Office

### Attachments

Photograph Addendum 1 through 3  
Cross connection template  
Backflow fact sheet

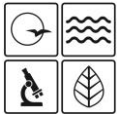
PWS (MO3031244) Chelsea Rose Subdivision  
Abandoned Well Report  
April 19, 2018



Owner and contact information: PWS is under receivership  
GPS Coordinates: Latitude: 38.11412 Longitude: -92.73637  
Photographer: Sheila Yoder  
Date: April 2, 2018  
Comments: Well #1 that has been disconnected from the system



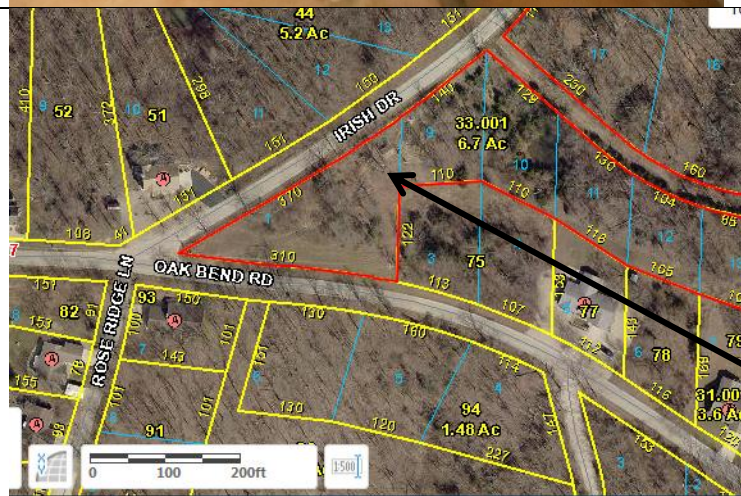
Photographer: Sheila Yoder  
Date: April 2, 2018  
Comments: Meter outside well #1 showing service date disconnect



**PHOTOGRAPH #1**  
TAKEN BY: Sheila Yoder  
ENTITY: Chelsea Rose Subd  
PERMIT: MO3031244  
LOCATION: wellhouse  
DESCRIPTION: well #2  
DATE TAKEN: April 2, 2018  
PROGRAM: Public Drinking Water Branch



**PHOTOGRAPH #2**  
TAKEN BY: Sheila Yoder  
ENTITY: Chelsea Rose Subd  
PERMIT: MO3031244  
LOCATION: wellhouse for well#2  
DESCRIPTION: bladder tank  
DATE TAKEN: April 2, 2018  
PROGRAM: Public Drinking Water Branch



**PHOTOGRAPH #3**  
TAKEN BY: CamdenCoGIS  
ENTITY: Chelsea Rose Subd  
PERMIT: MO3031244  
LOCATION: aerial view well #2  
DESCRIPTION: wellhouse local  
PROGRAM: Public Drinking Water Branch  
Arrow indicates location of well#2





Missouri Department of dnr.mo.gov

**NATURAL RESOURCES**

Eric R. Greitens, Governor

Carol S. Comer, Director

April 19, 2018

Ms. Jill D. Olsen, Trustee  
Chelsea Rose Subdivision  
118 N Conistor Lane Suite B290  
Liberty, MO 64068

### UNSATISFACTORY FINDINGS

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Sincerely,

SOUTHWEST REGIONAL OFFICE

Mark Rader, Chief  
Drinking Water Section

MDR/syl

Enclosure

c: Mr. Jim Busch, Public Service Commission  
Ms. Airin Haselwander, Well Installation Section  
Public Drinking Water Branch, Monitoring Section  
Mr. Tim Ripley, Operator/ Lake Ozark Water & Sewer

029.pdwp.ChelseaRoseSubdivision.x.mo3031244.2018.04.19.fy18.ins.x.sky.doc



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#### Physical (mailing) Addresses:

Mr. Tim Ripley  
Lake Ozark Water & Sewer  
840 Thunder Mountain Road  
Camdenton, MO 65020

Mr. Jim Bush  
Public Service Commission  
P.O. Box 360  
Jefferson City, MO 65102-0360

#### Email Addresses: (for those that have indicated this is the preferred method of receipt)

Ms. Airin Haselwander, Well Installation Section  
Haselwander, Airin <Airin.Haselwander@dnr.mo.gov>

#### FAX Numbers: (for those that have indicated this is the preferred method of receipt)

**Missouri Department of Natural Resources  
Southwest Regional Office/Public Drinking Water Branch  
Report of Inspection  
Chelsea Rose Subdivision  
Camden County, Missouri  
Public Water System ID Number MO3031244  
April 19, 2018**

## **Introduction**

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Missouri Department of Natural Resources

Ms. Sheila Yoder, Environmental Specialist

## **Facility Description and History**

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Mr. Gary Cover indicated the system is unable to conduct flushing in the system due to losing pressure due to lack of storage for the system. The Public Drinking Water Branch Enforcement issued a Notice of Violation in July 2014 for operating without a permit.

Since the last inspection on April 15, 2015 the master meter has been repaired or replaced, the system has filed for bankruptcy, and a Trustee has been appointed.

The system is located in the Lake of the Ozarks Watershed 10290109. The system was historically referred to as F-12 water due to its location on road F-12. It requires an operator properly certified at the DS-1 level. Mr. Tim Ripley is properly certified.

### **Discussion of Inspection and Observation**

I met with Mr. Ripley on April 2, 2018 at Chelsea Rose Subdivision; the inspection was conducted during normal business hours. Upon arrival I discussed the scope and the purpose of the inspection. I looked at the well and pressure tanks and took photos. Mr. Ripley said he had taken the 500-gallon tank off line for the winter because there is no heat or electric in that building, he said he was getting ready to put it back on line, and also said they had received no complaints on low pressure. The well was cycling frequently. I asked if there was a cross connection policy and Mr. Ripley said he wasn't aware of one. I looked at the system records and found the Primacy and Laboratory fees are up-to date, chemical and bacteriological samples were submitted as required.

We discussed that the emergency operation plan and procedures should be evaluated and updated. For more information please see the Model Emergency Operating Plan for Public Water Supplies located at <http://www.dnr.mo.gov/env/wpp/eop/index.html>.

The system has an abandoned well (#1) that has not been plugged properly as required by the Missouri Well Construction Rule. The rule requires that abandoned wells be disconnected from the distribution system and plugged to prevent contamination from entering the water-bearing formation. Our Well Installation Section will send you a letter with information on plugging the abandoned well. If you have questions regarding this requirement, please contact Ms. Airin Haselwander at 573-368-2196.

### **Sampling and Monitoring**

A sample was not collected during the time of the inspection due to weather conditions.

At the time of inspection there were no monitoring or maximum contaminant level violations during the last 24 months.

### **Engineering Assessment**

No engineering assessment was conducted at the time of this inspection.

### **Compliance Determination and Required Actions**

The facility is not in compliance with Missouri Safe Drinking Water Regulations based on observations made during the inspection.

### **Unsatisfactory Findings**

For all Unsatisfactory Findings listed below, a written response documenting actions taken to correct the violations is required by **May 21, 2018**.

1. The public water system does not have a Permit to Dispense Water to the Public as required by Safe Drinking Water Regulation 10 CSR 60-3.010(2)(A).

This system was referred to the Public Drinking Water Branch for enforcement previously; the ownership and receivership situation has hindered the issue. All public water systems must obtain a permit to dispense water to the public. There is no permit fee. A public water system must submit a permit to dispense application and must meet bacterial and chemical monitoring and maximum contaminant level requirements.

**REQUIRED ACTION:** Once the ownership issues have been resolved, complete and submit a new application for a permit to dispense and submit it with all required documentation, including a deed to the well property, to: Missouri Department of Natural Resources, Public Drinking Water Branch, Infrastructure, Permits and Engineering Section, P.O. Box 176, Jefferson City, MO 65102, Phone 573-751-5331, Fax: 573-751-3110. For questions concerning any permit enforcement action, please contact Mr. Lance Dorsey with the Public Drinking Water Branch at P.O. Box 176, Jefferson City, MO, 65102; telephone 573-751-5331.

2. The public water system failed to construct the public water system in accordance with approved plans and specifications in violation of Safe Drinking Water Regulation 10 CSR 60-10.010(4). Specifically, the water system failed to construct the storage as proposed and approved by the Department's construction authorization #3495-90. The storage tank was not constructed as approved, small pressure tanks were installed instead. The hydropneumatic (pressure) tanks do not provide adequate storage volume. Plans and specs were also later submitted under review#53782-05 that included a 4,512-gallon ground storage tank and booster pumps but the proposal was voided by Department staff due to a lack of response.

All community public water systems must obtain written authorization (a construction permit) from the Department prior to construction, alteration, or extension of the water system. Any deviation from the approved plans and specifications affecting capacity, hydraulic conditions, operating units, the functioning of water treatment processes, or the quality of water to be delivered must be approved in writing before such changes are made. Revised plans and specifications shall be submitted to the Department for review and approval before any construction work affected by such changes is started.

The public water system shall submit two copies each of engineering report, plans, and specifications along with an application for a new or revised construction permit to the Missouri Department of Natural Resources, Public Drinking Water Branch, P.O. Box 176, Jefferson City, Missouri 65102, 573-751-5331, for construction/completion of the public water system in accordance with the previously-approved engineering report, plans, and specifications.

### **Recommendations**

1. The public water system has not established a cross-connection control program.

The public water system should establish a written cross-connection control program to prevent contamination from being introduced into the system from back-pressure or back-siphonage. This cross-connection control program might include a cross-connection ordinance for cities and towns, a cross-connection clause in the user agreement for private utilities, and an inspection of all potential cross-connection sources such as car washes, school laboratories, beverage bottling plants, sewage treatment plants, facilities with boilers or fire sprinkler systems, mortuaries, irrigation systems, hospitals, and industrial manufacturing plants.

Whenever an unprotected cross-connection is discovered, it must be corrected by the customer installing a Department-approved air gap or backflow prevention device. Air gaps and backflow prevention devices must be tested annually by a certified tester, and results of these tests must be kept in the public water system records for a period of five years and made available to the Department inspector during inspections.

The public water system should establish a cross-connection control program. An example cross-connection control plan and a backflow prevention fact sheet is enclosed. The public water system must ensure all cross-connections have an approved back-flow prevention device and these devices are tested annually. If a back-flow prevention device has not been installed at any connection where there is a cross-connection this can be considered a Significant Deficiency.

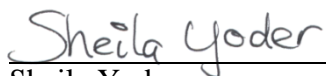
2. The pump discharge piping is not equipped with an aboveground check valve.

A well pump discharge check valve is needed to prevent water from the storage tank and distribution system from entering the well. Even wells with submersible pumps that have a check valve in the piping in the well need an above ground pump discharge piping check valve as a safety precaution. The only exception is a pump that discharges directly into the top of an unpressurized storage tank. The Department recommends a check valve should be installed between the well and storage tank.

### Signatures

SUBMITTED BY:

REVIEWED BY:



Sheila Yoder  
Environmental Specialist  
Southwest Regional Office



Kristen Pattinson, Chief  
Drinking Water Compliance Unit  
Southwest Regional Office

### Attachments

Photograph Addendum 1 through 3  
Cross connection template  
Backflow fact sheet

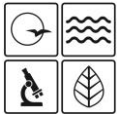
PWS (MO3031244) Chelsea Rose Subdivision  
Abandoned Well Report  
April 19, 2018



Owner and contact information: PWS is under receivership  
GPS Coordinates: Latitude: 38.11412 Longitude: -92.73637  
Photographer: Sheila Yoder  
Date: April 2, 2018  
Comments: Well #1 that has been disconnected from the system



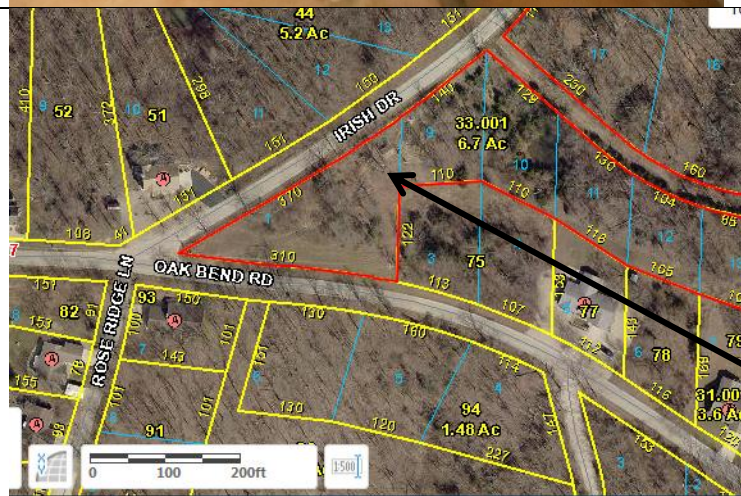
Photographer: Sheila Yoder  
Date: April 2, 2018  
Comments: Meter outside well #1 showing service date disconnect



**PHOTOGRAPH #1**  
TAKEN BY: Sheila Yoder  
ENTITY: Chelsea Rose Subd  
PERMIT: MO3031244  
LOCATION: wellhouse  
DESCRIPTION: well #2  
DATE TAKEN: April 2, 2018  
PROGRAM: Public Drinking Water Branch



**PHOTOGRAPH #2**  
TAKEN BY: Sheila Yoder  
ENTITY: Chelsea Rose Subd  
PERMIT: MO3031244  
LOCATION: wellhouse for well#2  
DESCRIPTION: bladder tank  
DATE TAKEN: April 2, 2018  
PROGRAM: Public Drinking Water Branch



**PHOTOGRAPH #3**  
TAKEN BY: CamdenCoGIS  
ENTITY: Chelsea Rose Subd  
PERMIT: MO3031244  
LOCATION: aerial view well #2  
DESCRIPTION: wellhouse local  
PROGRAM: Public Drinking Water Branch  
Arrow indicates location of well#2