



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
Chattanooga Environmental Field Office
1301 Riverfront Parkway, Suite 206
Chattanooga, Tennessee 37402
Phone 423-634-5745 Statewide 888-891-8332 Fax 423-634-6389

March 30, 2022

Mrs. Terri Smith Wilson
Armstrong Ferry Campground
6450 Armstrong Ferry Road
Decatur, Tennessee 37322

Re: **Sanitary Survey of Non-Community Water System**
Armstrong Ferry Campground Water System
PWSID: TN0004171
Meigs County, Tennessee

Dear Mrs. Wilson:

On March 22, 2022, Jennifer Dulin from the Division of Water Resources (DWR) visited the Armstrong Ferry Campground Water System and performed a Sanitary Survey. The survey consisted of a records review to document the operational performance of the system and an on-site inspection of the water treatment and distribution system. The survey covered the time period from November 2020 – March 2022. The Division would like to thank you for your courtesy, willingness to work with the Division, and timely responses to Division requests. In accordance with the Sanitary Survey Manual, the Armstrong Ferry Campground Water System earned 488 points out of a possible 488 points for a numerical score of one hundred percent (**100%**). This rating retains the Armstrong Ferry Campground Water System in the State's "**Approved**" category.

The following deficiencies, comments, and/or recommendations as outlined in the Sanitary Survey Rating Form were identified during the survey and should be addressed as applicable:

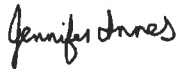
General Observations, Comments, and Other Recommendations

1. The wellhead protection plan for your water system was approved by the Nashville Central Office on March 31, 2019. The next update will be due **June 30, 2022**.
2. A Non-Community Cross Connection Statement was signed during the inspection. A copy has been enclosed for your records.
3. The chlorine residual was analyzed at the women's restroom sink faucet and was 2.5 mg/L during the survey, which is within the state approved range of 0.2 and 4.0 mg/L.
4. A nitrate sample was collected and analyzed by certified laboratory on November 16, 2021. As a reminder, a nitrate sample is due before December 31, 2022, and during each calendar year.

Mrs. Terri Smith Wilson
March 30, 2022
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Again, we would like to thank you for your assistance and courtesy. If you have any questions or need additional information, please contact Jennifer Dulin at 423-298-3233.

Sincerely,



Jennifer Innes, Program Manager
Chattanooga Environmental Field Office
Division of Water Resources

cc: Sophia DeMarse – Division of Water Resources, Nashville Central Office
Jennifer Dulin – Division of Water Resources, Chattanooga Environmental Field Office

**Non-Community Public Water System Statement
on Controlling Cross-Connection**

This is to certify that Terri Wilson
(Name)

has completed a detailed investigation of the Armstrong Ferry
(Name of Water System)

Campground non-community water system, (PWSID# TN00041571)

for the purpose of determining that the integrity of the water system is not compromised by cross-connection hazards. All cross-connections (actual or potential) have been eliminated or isolated from the system so as to prevent any possible backflow into the water lines. To the best of my knowledge and belief, there are no unprotected cross-connections within this water system or plumbing systems served by this non-community public water system as of 3.22.2022
(date)

Furthermore the health hazards have been, and will be, explained to others responsible for the installation, operation, and maintenance of the individual plumbing system(s) and the operation of water-using equipment and fixtures, whose cooperation is vital to safeguarding the quality of water being distributed. Realizing that cross-connections may be created easily through oversight by well meaning individuals, our pledge is to be constantly on guard to prevent the creation of new cross-connection hazards and to the prompt detection and correction of any cross-connections created by others. Furthermore, systematic surveys will be made periodically of water use practices throughout the system in an effort to safeguard the quality of water distributed.

These actions will be performed to insure compliance with the provisions of TCA 68-221-711(6).

Signed: Terri Wilson Date: 3-22-2022

CROSS-CONNECTION CONTROL

Cross Connections in a public water system are prohibited by T.C.A. 68-221-11(6)

What is a Cross-connection? Unsafe and contaminated water doesn't belong in your water system but it can end up there if caution is not utilized. A cross-connection is a potential or actual link between the drinking water supply line and any pipes or containers that contain polluted water, or water of unknown quality. Backflow of polluted water into drinking water lines can occur if for some reason the drinking water lines lose pressure. It can also occur when water lines are connected to some device containing fluids under higher pressure such as an industrial, residential, or commercial boiler. Backflow can also occur if the public water lines are connected to a home or business using a well or another source for an auxiliary water supply. The common garden hose is responsible for many cross-connections because it is usually submerged in the container it is used to fill.

How can backflow be prevented? Maintaining an air gap between drinking water and unsafe liquids is the most effective means of backflow prevention. Backflow prevention is enhanced by maintaining reasonable pressures at all times in the public water system lines and notifying customers when water will be shut off. Backflow can also be prevented by installing special valves in the water lines called backflow prevention devices. Tennessee Law prohibits allowing cross-connections to occur in a public water system. It is important that non-community water systems be aware that cross-connections can introduce bacteria and chemicals into drinking water lines. It is the responsibility of the water supplier to prevent contamination of public water systems from backflow. Backflow or the reversal of flow in water lines may occur as the result of backsiphonage or by backpressure. Never submerge the end of a water hose or water supply line into any liquid that is not safe to drink. Any loss of pressure in the water system could cause backsiphonage to occur.

As a public non community water system we will consistently work to monitor water use in the system to prevent/eliminate any known potential or actual cross connections present, and will also work to be aware of any piping changes or changing water system conditions which might present or possibly create a cross connection hazard. If a cross connection is found in the system, it will be immediately eliminated by air gap or other acceptable means as necessary. Customers will also be made aware of the importance in preventing cross connection hazards in the water system.

Joni Egan-Wilson System Official

Armstrong Ferry Campground Water System

PWSID # TN000 4171

Date: 3-22-2022

Sanitary Survey Rating

PWSID: TN0004171

Water System Name: Armstrong Ferry Campground Water System

Survey Date: 22-Mar-22

System Category (Points): 421
488
599

421 - Consecutive Systems/Distribution Only
488 - Treatment Systems/Wholesalers
599 - Both Treatment and Distribution

1. System Management and Operation (94)

	Requirement	Points Range	Deduction	Comments
A.	Record Keeping 0400-45-01-.20	(0)	Narrative	Records were neat and organized.
B.	Construction Projects 0400-45-01-.05, 0400-45-01-.17	(1-5)		n/a
C.	Submission of Monthly Operations Reports 0400-45-01-.17	(0)	Narrative	n/a
D.	Reporting Requirements 0400-45-01-18	(4-30)		In compliance.
E.	Public Notification 0400-45-01-.19	(3-10)		n/a
F.	Facility Maintenance Fee	(0)	Narrative	n/a
G.	Enforcement - TCA §68-221-701 et seq	(4-10)		n/a
H.	Emergency Operations Plan 0400-45-01-.17	(3)		n/a
Deficiency Subtotal			0	

2. Operator Compliance (23)

	Requirement	Points Range	Deduction	Comments
A.	Certified Operator – Plant and Distribution System 0400-45-01-.17(1) and 0400-49-01- 04	(3-15)		Jeffrey Hogan
Deficiency Subtotal			0	

3. Source (25)

	Requirement	Points Range	Deduction	Comments
A.	Source Adequacy 0400-45-01-.02, .05, .16, .17(13) and .34(3)	(3-5)		Good.
B.	Intake 0400-45-01-.05, .17	(2)		n/a
C.	Wellhead/Springbox Construction 0400-45- 01-.05(12),16 and 17(3) and (16)	(2)		
D.	Source Protection Plans 0400-45-01-.34	(1-2)		New plan was approved on March 31, 2019. Updated plan is due June 30, 2022.
Deficiency Subtotal			0	

4. Treatment (153)

	Requirement	Points Range	Deduction	Comments
A.	Aerator 0400-45-01-.05, .17	(2)		n/a
B.	Chemicals / Chemical Feeders 0400-45-01-.05 (8) and .17,36	(2)		n/a
C.	Mixing 0400-45-01-.02, .05, .17	(2)		n/a
D.	Flocculation 0400-45-01-.02, .05, .17	(2)		n/a
E.	Sedimentation 0400-45-01-.02, .05, .17	(2)		n/a
F.	Filtration / Alternative Technology 0400-45-01-.17(12) and (27)	(2-30)		n/a
G.	Re-Wash / Filter-to-Waste 0400-45-01-.17(35)	(2)		n/a
H.	Turbidimeters / Calibration 0400-45-01-.05(11), .17, .31, .39	(2-4)		n/a
I.	Disinfection/Calibration 0400-45-01-.02, .17, .31, .36	(2-30)		n/a
J.	Disinfection Contact Time 0400-45-01-.02, .17,31	(2-4)		n/a
K.	Master Meter 0400-45-01.17(2) and (3)	(1-2)		n/a
L.	Maintenance of Equipment, Buildings and Grounds 0400-45-01-.02, .17(3), (17) and (19)	(1)		Very neat and clean. Well maintained.
M.	Laboratory Facilities 0400-45-01-.02, .14, .17(3)	(1-3)		n/a
N.	Safety 0400-45-01-.02	(2)		n/a
O.	Sludge Handling/Backwash Handling 0400- 45-01-.05	(2)		n/a
P.	Sanitary Conditions 0400-45-01-.17(17)	(2)		Neat and clean.
Q.	Fluoridation Techniques 0400-45-01-.06, .12, .17	(2)		n/a
R.	Design Capacity 0400-45-01-.05(10)	(2-4)		n/a
S.	Filter Backwash Recycling 0400-45-01-.31(9)	(1)		n/a
Deficiency Subtotal			0	

5. Monitoring, Data Verification and Compliance (175)

	Requirement	Points Range	Deduction	Comments
A.	Laboratory-Process Monitoring (excluding Turbidity and Chlorine Residual) 0400-45-01-17(3)	(2-4)		n/a
B.	Bacteriological Monitoring	(3-6)		All samples collected as required.
C.	Bacteriological Compliance 0400-45-01-.06	(4-7)		n/a
D.	Turbidity Monitoring	(2-3)		n/a
E.	Turbidity Compliance	(4-7)		n/a
F.	Chlorine Residual Monitoring 0400-45-01-.17, .31, .36, .40	(2-3)		Chlorine residual was 2.5 mg/L at the women's restroom faucet during the inspection.
G.	Primary Chemicals Monitoring	(2-3)		Nitrate sample analyzed on 11/16/2021. Due again by December 31, 2022.
H.	Primary Chemicals Compliance	(4)		In compliance.
I.	Lead and Copper Monitoring 0400-45-01-.33	(2-3)		n/a
J.	Lead and Copper Action Level 0400-45-01-.33	(3-5)		n/a
K.	Disinfection/Disinfection By-Products and Precursors Monitoring 0400-45-01-.36, .37, .38	(2-3)		n/a
L.	Disinfection/Disinfection By-Products and Precursors Compliance 0400-45-01-.06, .36	(2-30)		n/a
M.	Secondary Chemicals 0400-45-01-.12	(2)		n/a
N.	Secondary Chemicals Compliance 0400-45-01-.12	(3)		n/a
O.	Cryptosporidium Monitoring 0400-45-01-.39	(0)	Narrative	n/a
Deficiency Subtotal			0	

6. Finished Water Storage (25)

	Requirement	Points Range	Deduction	Comments
A.	Adequate Storage 0400-45-01-.17(14)	(3-15)		n/a
B.	Inspection and Maintenance of Reservoirs, Tanks and Clearwell 0400-45-01-.17(16), (17), (33) and (34)	(1-10)		n/a
Deficiency Subtotal			0	

7. Pumps, Pump Facilities and Controls (18)

	Requirement	Points Range	Deduction	Comments
A.	Pump Facilities 0400-45-01-.17(9) and (13)	(1-4)		Good.
B	Maintenance of Pumping Equipment 0400-45 - 01-.17(13)	(1-3)		Good.
Deficiency Subtotal			0	

8. Distribution System and Cross Connection Controls (86)

	Requirement	Points Range	Deduction	Comments
A.	Notification, Inspection, Disinfection and Sample Collection of New or Existing Facilities 0400-45-01-.17(8), (19)	(3-5)		n/a
B	Flushing Program / Blow Offs 0400-45-01-.17(10) and (23)	(3-4)		n/a
C.	Fire Hydrants 0400-45-01-.17(18)	(0)	Narrative	n/a
D.	Adequate Pressure 0400-45-01-.17(9)	(5)		n/a
E.	Map of Distribution System 0400-45-01-.17(15)	(3)		n/a
F.	Approved Cross Connection Policy or Ordinance and Plan 0400-45-01-.17(6)	(4)		n/a
G.	Working Cross Connection Program 0400- 45-01-.17(6)	(3-9)		New form signed. A copy is enclosed for your records.
H.	Percent Estimated Water Loss(real loss/water produced)	(0)	Narrative	n/a
Deficiency Subtotal			0	

Rating

- 95% - 100% Approved
- 90% - 94% Provisionally Approved
- 0% - 89 % Unsatisfactory

Total Deficiency Points	0
Overall Rating	488
	100.00%

Inspectors Signature Jennifer Dulin Digitally signed by Jennifer Dulin
Date: 2022.03.28 12:39:56 -04'00'

Additional Comments/Explanation: