



United States Environmental Protection Agency
Office of Enforcement and Compliance Assurance
Office of Criminal Enforcement, Forensics and Training

National Enforcement Investigations Center

NEIC

NEICVP1637E01

NEIC CIVIL INVESTIGATION REPORT
City of Wichita Public Water System
Wichita, Kansas

Investigation Dates:
November 3-7, 2025

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and provides a clear indication of the end of this report.**

INVESTIGATION OVERVIEW

PROJECT OBJECTIVE

U.S. Environmental Protection Agency (EPA) Region 7 (Region 7) requested EPA's National Enforcement Investigations Center (NEIC) conduct a Safe Drinking Water Act (SDWA) compliance investigation of the City of Wichita public water system (Wichita PWS) located in Wichita, Kansas. The investigation assessed the PWS's compliance with the National Primary Drinking Water Regulations found in 40 Code of Federal Regulations (CFR) Part 141 and applicable requirements found in the Kansas Administrative Regulations (KAR) 28 Articles 15 and 15a.

Table 1 lists the project team members.

Table 1. PROJECT TEAM MEMBERS		
Team Member	Organization	Project Role
David Parker	NEIC	Project manager (PM)
Conor Goulding	NEIC	Field team member
REGIONAL AND OTHER CONTACTS		
Adam Hendrickson	EPA Region 7	Regional field team member
Heidi Rausch	EPA Headquarters OCE/WED	Headquarters field team member
Brady Taylor	Kansas Department of Health and Environment (KDHE)	State Representative

FACILITY CONTACT INFORMATION

Table 2 lists the primary facility contacts.

Table 2. FACILITY CONTACT INFORMATION		
Name, Title	Phone No.	Email Address
Gary Janzen, Director of Public Water Utility	316-268-4108	gjanzen@wichita.gov
Don Henry, Assistant Director of Public Water Utility	316-268-4513	dhenry@wichita.gov
Adam McGlory, Operator in Charge	316-461-7151	
Logan Walker, Interim Division Manager	316-268-4766	lmwalker@wichita.gov
Deb Ary, Interim Manager, Main WTP		
Shawn Maloney, Groundwater Protection Manager		
Mike Mayta, Chief Information Officer	316-268-4318	mmayta@wichita.gov
Matt Townsend, Water Distribution	316-219-8906	mtownsend@wichita.gov

FACILITY OVERVIEW

The scope of the on-site inspection covered the Wichita PWS. Wichita PWS is located in Sedgwick County, Kansas, and serves approximately 395,699 customers in the city of Wichita and 11 consecutive systems. The

consecutive systems consist of eight cities or towns and three Rural Water Districts. There are approximately 161,000 service connections. According to EPA's Enforcement and Compliance History Online (ECHO) website, Wichita PWS was last inspected for SDWA requirements in May 2022 (listed as a state-conducted complete sanitary survey inspection). Minor deficiencies were noted related to storage, pumps, source, and treatment. No regulatory violations were reported in ECHO over the past three years. The Kansas Department of Health and Environment (KDHE) administers the Public Water System Supervision Program in Kansas and has primary enforcement responsibility (i.e., primacy) as authorized by EPA.

FACILITY OPERATIONS SUMMARY

Wichita PWS obtains its drinking water from surface water and groundwater sources. The surface water source, Cheney Reservoir, was constructed in the 1960s and is located on the North Fork of the Ninnescah River. All water from Cheney Reservoir is treated with ozone then pumped to either the existing main water treatment plant (Main WTP) or the Wichita Water Works (WWW) water treatment plant (WTP) (undergoing startup at the time of this inspection and scheduled to begin production in 2026). Water from Cheney Reservoir travels through a pump station which utilizes five pumps and undergoes ozonation along with copper ion treatment to control zebra mussels.

The groundwater sources are located in the Equus Bed Aquifer, drawn from a wellfield on the northwest side of Wichita. Wichita PWS utilizes 78 production wells. Production wells M1 through M25 were drilled between 1949 and 1945, while production wells M26 through M35 were drilled between 1949 and 1952. Groundwater from the Equus Bed Aquifer wells are transmitted to either the Main WTP or WWW WTP. Other wells used by the water system include five aquifer recharge and recovery (RRW) wells which are recharge wells used to control chlorides, three diversion wells, six Bentley Reserve production wells, and 11 wells located near the Main WTP (S wells).

Aquifer Storage and Retrieval (ASR) is utilized to bolster the groundwater resources by taking surface water from the Little Arkansas River when streamflow conditions between March and November each year are high enough to allow for water to be withdrawn. This water is treated with a prefilter, submerged microfiltration membranes, and ozonation before this treated water is either injected into wells for future use or routed to the Main WTP or WWW WTP. Water can be pumped into and out of the ASR wells. Water retrieved from the ASR wells is routed for treatment to either the Main WTP or WWW WTP. Twenty-nine ASR wells were constructed in 2010.

The Main WTP was constructed in two phases, with the East Plant completed in 1942 and the Central Plant completed in 1957. The WWW WTP is scheduled for completion in 2026. Water is pumped to both WTPs from the wellfields, reservoir, or ASR treatment facility. At the time of this inspection, startup testing was underway at the WWW WTP with some production water from that plant being routed to the Main WTP for treatment.

The Main WTP can treat up to 120 million gallons per day (mgd) (the current average is 64 mgd) using aeration, mixing, clarification, sedimentation with ferric chloride coagulant, lime softening, filtration, disinfection with chlorine and ammonia, and corrosion inhibition with an ortho/poly phosphate blend. Finished water is routed to a 3 million gallon disinfection contact basin.

When fully operational, the WWW WTP will treat up to 120 mgd water with aeration, pre-oxidation as needed using sodium permanganate, rapid mix/coagulation/sedimentation with ferric chloride, lime softening, polymer addition, filtration, and disinfection

Treated water is routed to five gravity fed reservoirs, which range in volume from 3 million gallons (MG) to 10 MG. These reservoirs are located in close proximity to the Hess pump station, which contains eight high service pumps. The pumps range from 25 mgd to 40 mgd.

The Wichita PWS distribution system has 161,000 service connections, 53,000 valves, 16,000 hydrants, and 2,553 miles of pipe. System officials reported that approximately 30,000 service lines are composed of unknown materials (under the Lead and Copper Rule Improvements, systems must identify all unknown service lines and replace any lead service lines by 2037). There are three elevated storage tanks in the distribution system, two of which have a capacity of 2 mgd each (Woodlawn Tower and Roosevelt Tower) are in use, and one, with a capacity of 1 mgd, (Northeast or Bel-Aire Tower) is not in use. The Webb pump station and underground reservoir provide water to the east and northeast sides of Wichita. There are also two other booster pump stations, the West Maple booster pump station and the Southeast booster pump station.

FIELD ACTIVITIES SUMMARY

David Parker and Conor Goulding from NEIC conducted a SDWA on-site inspection of the Wichita PWS from November 3-7, 2025. Adam Hendrickson from Region 7, Heidi Rausch from EPA Headquarters, and Brady Taylor from KDHE participated in the inspection.

On November 3, NEIC inspectors conducted an opening meeting with Wichita PWS officials, and presented credentials to Don Henry, Assistant Director of Public Water Utilities. On November 7, NEIC inspectors conducted a closing meeting with the Wichita PWS and KDHE. Lists of the opening and closing meeting attendees can be found in **Appendix A**.

NEIC assessed Wichita PWS' compliance with the SDWA regulations found in 40 CFR Part 141 and applicable state regulations found in KAR 28 Articles 15 and 15a. The assessment included detailed discussions and field observations of the surface water intakes, groundwater wells, aquifer storage and retrieval (ASR) wells, water treatment plants, and the storage tanks and pump stations in the distribution system. The assessment also included a review of records, including system maps, pumping station schematic diagrams, monitoring records, emergency response plans, and risk and resiliency assessment plans. NEIC inspection photographs are included in **Appendix B** and the 2022 KDHE sanitary survey is included in **Appendix C**.

INVESTIGATION OBSERVATIONS

NEIC identified the following observations during the SDWA Public Water System Supervision compliance inspection. NEIC field team members discussed all observations with facility representatives during the closeout meeting unless otherwise noted in the observation description.

These observations are not final compliance determinations. EPA Region 7 will make the final compliance determinations based on its review of this report and other technical, regulatory, and facility information.

Observation: 1
Observation Summary: NEIC inspectors observed several operation and maintenance issues at the Wichita PWS elevated storage tanks.
Citation: KDHE Minimum Design Standards for Public Water Systems in Kansas <i>Chapter VI WATER STORAGE TANKS</i> <i>B. OTHER CONSIDERATIONS</i> <i>8. PAINTING AND/OR CATHODIC PROTECTION - Proper protection shall be given to metal surfaces by paints or other protective coatings, by cathodic protective devices, or by both. All interior coatings or paints must be certified as meeting NSF International's ANSI/NSF standards for potable water, or equivalent, applied in conformance with the manufacturer's recommendations, and protect public health and the environment (KAR 28-15-18(h)). After curing, the coating or coating system shall not transfer any toxic or taste and odor causing substances to the water. Prior to placing a tank in service, an analysis for VOCs [Volatile Organic Compounds] is advisable to establish that the coating is properly cured.</i>
Evidence: Appendix C - NEIC Inspection Photographs
Description of Observation: City of Wichita PWS owns and operates three elevated storage tanks, two of which are active (elevated steel tanks) and one (elevated composite tank) is not in use. The tanks were evaluated for maintenance condition and the following was observed. • The Woodlawn Tower elevated tank was found to have chipping and flaking paint (Appendix B – Photo PB060018.JPG). • The Roosevelt Tower elevated steel tank base was found to have an opening that was partially covered with concrete debris (Appendix B – Photo PB060019.JPG).

Observation: 2

Observation Summary: The Wichita PWS distribution system contains roughly 30,000 service lines of unknown composition that the water system is working to identify.

Citation:**40 CFR § 141.84 – Service line inventory and replacement requirements**

Note: regulatory language below reflects requirements under the Lead and Copper Rule Improvements (LCRI), of which the compliance date will begin in 2027.

(d) Mandatory full-service line replacement.

(1) All water systems must replace all lead and galvanized requiring replacement service lines under the control of the water system unless the replacement would leave in place a partial lead service line.

(4) The deadline for water systems to replace all lead and galvanized requiring replacement service lines under the control of the water system is no later than 10 program years after the compliance date specified in § 141.80(a)(3) unless the system is subject to a different deadline under paragraphs (d)(5)(v) and (vi) of this section.

(5) Water systems must meet a minimum cumulative average annual replacement rate for completing mandatory service line replacement in accordance with this paragraph (d)(5):

(i) Annual replacement rate. A water system must replace lead and galvanized requiring replacement service lines as described in paragraph (d)(6) of this section at an average annual replacement rate of at least 10 percent calculated across a cumulative period unless the system is subject to a shortened replacement rate or eligible for a deferred replacement rate in accordance with paragraphs (d)(5)(v) and (vi) of this section.

(ii) Cumulative percent of service lines replaced. To calculate the cumulative percent of service lines replaced, at the end of each mandatory service line replacement “program year” as specified in paragraph (d)(5)(iii) of this section, water systems must divide the total number of lead and galvanized requiring replacement service lines replaced thus far in the program in accordance with paragraph (d)(6)(iii) of this section by the number of service lines within the replacement pool in accordance with paragraph (d)(6)(i) of this section.

(iii) Program year. The first mandatory service line replacement “program year” is from the compliance date specified in § 141.80(a)(3) to the end of the next calendar year. Every program year thereafter is on a calendar year basis. This paragraph (d)(5)(iii) applies for the purposes of this section.

(iv) Cumulative average replacement rate. The annual replacement rate in paragraph (d)(5)(i) of this section is assessed annually as a cumulative average. The first cumulative average replacement rate must be assessed at the end of the third program year and is calculated by dividing the cumulative percent of service lines replaced in accordance with paragraph (d)(5)(ii) of this section by the number of completed program years (or three in this case). Annually thereafter, at the end of each program year, systems must assess the cumulative average replacement rate by dividing the most recent cumulative percent of service lines replaced in accordance with paragraph (d)(5)(ii) by the number of completed program years. Except as provided in paragraph (d)(5)(iv)(A) of this section, the cumulative average replacement rate must be 10 percent or greater each program year, and the water system must replace all lead and galvanized requiring

replacement service lines under its control by the applicable deadline for completing mandatory service line replacement in accordance with paragraph (d)(4) of this section.

(A) A water system is not required by this section to meet the cumulative average replacement rate described in this paragraph (d)(5) where, after the compliance date specified in § 141.80(a)(3), the system has replaced all lead and galvanized requiring replacement service lines in the replacement pool as described in paragraph (d)(6)(i) of this section that are under the control of the system, identified all unknown service lines in the inventory, and documented and submitted to the State the reasons the system currently does not have access to conduct full replacement of the remaining lead and galvanized requiring replacement service lines in the replacement pool in accordance with paragraphs (d)(2) and (3) of this section. When lead and galvanized requiring replacement service lines come under the control of the system, the water system is required to replace the service lines as described in this paragraph (d). This paragraph (d)(5)(iv)(A) continues to apply until all lead and galvanized requiring replacement service lines are replaced.

(vi) *Deferred deadlines and associated replacement rates.* A water system may defer service line replacement past the deadline in paragraph (d)(4) of this section if the system meets the following criteria:

(A) If a water system replacing 10 percent of the total number of known lead and galvanized requiring replacement service lines in a system's replacement pool results in an annual number of service line replacements by the water system that exceeds 39 per 1,000 service connections, the system may complete replacement of all lead and galvanized requiring replacement service lines by a deadline that corresponds to the system conducting 39 annual replacements per 1,000 service connections at a cumulative average replacement rate assessed in accordance with paragraph (d)(5)(iv) of this section. This paragraph (d)(5)(vi)(A) is also applicable if a water system with service lines newly under their control, after previously not having control as described in paragraph (d)(5)(iv)(A) of this section, is required to conduct more than 39 annual replacements per 1,000 service connections. The number of annual replacements corresponding to 39 annual replacements per 1,000 service connections can be calculated by multiplying the number of service connections in a system by 0.039. The number of years needed to complete replacement is the total number of known lead and galvanized requiring replacement service lines in a system's replacement pool divided by the calculated number of annual replacements. To calculate the minimum cumulative average replacement rate, the system must divide 100 by the number of years needed to achieve replacing 39 annual replacements per 1,000 service connections, expressed as a percentage.

(B) Any water system that is eligible for and plans to use a deferred deadline must include information, in accordance with paragraph (c)(1)(x) of this section, to support the use of a deferred deadline including identifying the deadline and associated cumulative average rate of replacement to meet this deferred deadline in the system's initial service line replacement plan and subsequent updates to the plan in accordance with paragraph (c) of this section. The system must identify an annual replacement rate that is no less than 39 annual replacements per 1,000 service connections.

(C) As soon as practicable, but no later than the end of the second program year as defined in paragraph (d)(5)(iii) of this section, and every three years thereafter, the State must determine in writing whether the deferred deadline and associated cumulative average replacement rate the system documented in paragraph (c)(1)(x)(B) of this section are the fastest feasible to conduct mandatory service line replacement and either approve the continued use of this deferred deadline and replacement rate as the fastest feasible for the system, or set a shorter deferred deadline and identify an associated replacement rate to ensure the

system is replacing service lines at the fastest feasible rate for the system. The State must consider information that includes, but is not limited to, the system's submissions of the service line inventory and replacement plan in accordance with paragraph (a) through (c) of this section and information collected from other water systems conducting mandatory service line replacement. The State may require the system to provide additional information for the State to consider in its assessment of the continued use of a deferred deadline and the fastest feasible replacement rate.

(D) In the first two program years, the system must comply with the annual replacement rate identified in its initial replacement plan (unless the State determines a faster rate is feasible sooner). In subsequent program years, the system must comply with the applicable deferred deadline and associated replacement rate identified in the State's written determination of the deadline and replacement rate in paragraph (d)(5)(vi)(C) of this section.

Evidence:

City of Wichita Service Line inventory

NEIC inspector interviews with Wichita PWS staff

Description of Observation: System officials stated that Wichita PWS has approximately 30,000 service lines of unknown composition. Under the Lead and Copper Rule Improvements, systems must identify all unknown service lines and replace any lead service lines by 2037.

Observation: 3

Observation Summary: NEIC inspectors found multiple operation and maintenance issues at the Wichita PWS Main WTP.

Citation:

American Water Works Association (AWWA) G100-11 Water Treatment Plant Operation and Management, § 4.3.1 Maintenance management states, "The plant shall have a maintenance management system with practices adequate to sustain plant performance. The system shall document maintenance frequency goals, and there shall be a system to take corrective action if the goals are not being achieved," and § 4.3.4.2 Maintenance program states, "The plant shall have written maintenance procedures for every major piece of mechanical equipment (including emergency power generating equipment), describing frequency, procedures, and maintenance of records...Records shall document inspections and any service performed."

Evidence:

Appendix C - NEIC Inspection Photographs

Description of Observation:

The referenced AWWA citation is guidance for the operation of water systems and is not enforceable under state or federal rules. NEIC inspectors observed the following operations and maintenance issues at the Wichita PWS:

- Aerator No. 2 at the Central Plant exhibited an area of low flow due to a clogged area in the top tray. (**Appendix B** – PB050004.JPG and PB050005.JPG)
- Chlorine Tank No. 2 at the Central Plant exhibited rust and corrosion on the plate above the tank and associated rust stains on the side of the tank. (**Appendix B** – PB050006.JPG and PB050007.JPG)

- The influent valve for Filter No. 7 at the Central Plant exhibited rusty bolts (**Appendix B – PB050008.JPG and PB050009.JPG**)
- Rusty beams were found under and near Rapid Mix No. 4 at the East Plant (**Appendix B – PB050010.JPG**)
- Severe rust and corrosion were found on bolts on the influent line at the East Plant, rust was found around the pressure gauge, and severely corroded bolts were found on the gate valve. (**Appendix B – PB050011.JPG, PB050012.JPG, and PB050013.JPG**)

Observation: 4

Observation Summary: NEIC inspectors found multiple operation and maintenance issues at two reservoirs within the Wichita PWS distribution system.

Citation:

40 CFR 141.63: Maximum contaminant levels (MCLs) for microbiological contaminants.

(e) The Administrator, pursuant to section 1412 of the Act, hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant level for total coliforms in paragraphs (a) and (b) of this section and for achieving compliance with the maximum contaminant level for E. coli in paragraph (c) of this section: (3) Proper maintenance of the distribution system including appropriate pipe replacement and repair procedures, main flushing programs, proper operation and maintenance of storage tanks and reservoirs, cross connection control, and continual maintenance of positive water pressure in all parts of the distribution system:

Evidence:

Appendix C - NEIC Inspection Photographs

Description of Observation:

NEIC inspectors observed the following operations and maintenance issues at two of the underground water storage reservoirs within the Wichita PWS:

- The manhole hatch for the access ladder to the 9 million gallon reservoir was found to have a hole that provided a direct conduit to finished drinking water and no gasket was found around the perimeter of the manhole hatch. Both items provided a potential route of microbial contamination (**Appendix B – PB060014.JPG**)
- The overflow flap for the Webb Reservoir did not make a complete watertight seal, providing a potential route of microbial contamination. (**Appendix B – PB060017.JPG**)

Observation: 5

Observation Summary: NEIC inspectors found operation and maintenance issues at the several of the Wichita PWS groundwater wells.

Citation: *none*

Evidence:

Appendix C - NEIC Inspection Photographs

Shawn interview

Description of Observation:

NEIC inspectors observed the following operations and maintenance issues at several of the Wichita groundwater wells:

- Well MR23 exhibited corrosion on the well casing at the floor and on the down tubes (**Appendix B** – PB040001.JPG and PB040002.JPG).
- Well MR55 exhibited corrosion on the well casing at the floor and operator Shawn reported that some sand had been entering the well through the down tubes. (**Appendix B** – PB040003.JPG)
- Well S7 was found to have a hole in the vent screen (**Appendix B** – PB060015.JPG and PB060016.JPG)
- Well S6 was found to have a drawdown tube that was uncapped. While on site, an operator replaced the cap.

Observation: 6

Observation Summary: During the inspection, EPA inspectors reviewed the System's ERP (Emergency Response Program) pursuant to SDWA Section 1433 and observed that the ERP did not include all required elements.

Citation:**42 United States Code (U.S.C.) 300i-2 Community water system risk and resilience***(b) Emergency response plan*

Each community water system serving a population greater than 3,300 shall prepare or revise, where necessary, an emergency response plan that incorporates findings of the assessment conducted under subsection (a) for such system (and any revisions thereto). Each community water system shall certify to the Administrator, as soon as reasonably possible after October 23, 2018, but not later than 6 months after completion of the assessment under subsection (a), that the system has completed such plan. The emergency response plan shall include—

- (1) strategies and resources to improve the resilience of the system, including the physical security and cybersecurity of the system;*
- (2) plans and procedures that can be implemented, and identification of equipment that can be utilized, in the event of a malevolent act or natural hazard that threatens the ability of the community water system to deliver safe drinking water;*
- (3) actions, procedures, and equipment which can obviate or significantly lessen the impact of a malevolent act or natural hazard on the public health and the safety and supply of drinking water provided to communities and individuals, including the development of alternative source water options, relocation of water intakes, and construction of flood protection barriers; and*
- (4) strategies that can be used to aid in the detection of malevolent acts or natural hazards that threaten the security or resilience of the system.*

(c) Coordination Community water systems shall, to the extent possible, coordinate with existing local emergency planning committees established pursuant to the Emergency Planning and Community Right-To-Know Act of 1986 (42 U.S.C. 11001 et seq.) when preparing or revising an assessment or emergency response plan under this section.

Evidence:

NEIC inspector observations

Interviews with Wichita PWS officials

Description of Observation:

During the inspection, EPA inspectors reviewed the System's ERP pursuant to SDWA Section 1433 and observed that the ERP did not include all required elements. During the inspection, EPA inspectors reviewed the System's Emergency Response Plan (ERP) pursuant to SDWA Section 1433 and observed that the ERP did not include all required elements. Additional details were conveyed verbally to the water system.