UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

ANNUAL COMPLIANCE REPORT

for

PUBLIC WATER SYSTEMS

in the

DISTRICT OF COLUMBIA

during

CALENDAR YEAR 2016

INTRODUCTION

The Drinking Water Program: An Overview

The U.S. Environmental Protection Agency (EPA) established the Public Water System Supervision (PWSS) Program under the authority of the 1974 Safe Drinking Water Act (SDWA). Under the SDWA and the 1986 and 1996 Amendments, EPA sets national limits on contaminant levels in drinking water to ensure that the water is safe for human consumption. These limits are known as Maximum Contaminant Levels (MCLs) and Maximum Residual Disinfectant Levels (MRDLs). For some regulations, EPA establishes treatment techniques in lieu of an MCL to control unacceptable levels of contaminants in water. The Agency also regulates how often public water systems (PWSs) monitor their water for contaminants and report the monitoring results to the States or EPA. Generally, the larger the population that is served by a water system, the more frequent the monitoring and reporting (M/R) requirements. In addition, EPA requires PWSs to monitor for selected unregulated contaminants to provide data for future regulatory development. Finally, EPA requires PWSs to notify the public when they have violated these regulations. The 1996 Amendments to the Safe Drinking Water Act require each state to submit to the EPA Administrator an annual report of violations and to make the annual report available to the general public on the web. The report is required to include a clear and understandable explanation of the nature of the violation, its potential adverse health effects, steps that the PWS is undertaking to correct the violation, and the possibility of alternative water supplies during the violation.

The SDWA applies to the 50 States, the District of Columbia, Indian Lands, Puerto Rico, the Virgin Islands, American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands.

The SDWA allows States and Territories to seek EPA approval to administer their own PWSS Programs. The authority to run a PWSS Program is called primacy. For a state to receive primacy, EPA must determine that the state meets certain requirements laid out in the SDWA and the regulations, including the adoption of drinking water regulations that are at least as stringent as the Federal regulations and a demonstration that the state can enforce the program requirements. Of the 56 States and Territories, all but Wyoming and the District of Columbia have primacy. The EPA Regional Offices administer the PWSS Programs within these two jurisdictions. Thus, the EPA Region III Office, in Philadelphia, Pennsylvania, administers the PWSS Program in the District of Columbia and is responsible for producing this Annual Compliance Report.

The 1986 SDWA Amendments gave Indian Tribes the right to apply for and receive primacy. EPA currently administers PWSS Programs on all Indian lands except the Navajo Nation, which was granted primacy in late 2000. EPA does not administer a tribal drinking water program in Region III because the one federally-recognized tribe located in Region III does not have a public water system.

Annual State PWS Report

Each quarter, primacy states/agencies submit data to the Safe Drinking Water Information System (SDWIS), an automated database maintained by EPA. The data submitted include, but are not limited to, PWS inventory information; the incidence of Maximum Contaminant Level (MCL), Maximum Residual Disinfectant Level (MRDL), monitoring and treatment technique violations; and information on enforcement activity related to these violations. Section 1414(c)(3) of the Safe Drinking Water Act requires states to provide EPA with an annual report of violations of the primary drinking water standards. This report provides the numbers of violations in each of six categories: MCLs, MRDLs, treatment techniques, variances and exemptions, significant monitoring violations, and significant consumer notification violations. The EPA Regional Offices report the information for Wyoming, the District of Columbia, and all Indian Lands except the Navajo Nation. EPA Regional offices also report Federal enforcement actions taken in those locations. Data retrieved from SDWIS form the basis of this report. A summary of calendar year 2016 violations for the District of Columbia is included in Appendix A of this report.

DEFINITIONS AND SUMMARY OF 2016 DATA

Public Water System

A Public Water System (PWS) is defined as a system that provides water via piping or other constructed conveyances for human consumption to at least 15 service connections or serves an average of at least 25 people for at least 60 days each year. There are three types of PWSs. PWSs can be community (such as cities and towns), nontransient noncommunity (such as schools or factories), or transient noncommunity systems (such as rest stops or parks). For this report, when the acronym "PWS" is used, it means systems of all types unless specified in greater detail.

The principal community PWSs in the District of Columbia are the Washington Aqueduct Division of the U.S. Army Corps of Engineers (Aqueduct), which treats the water served to the District, and the District of Columbia Water and Sewer Authority (DC Water), which distributes and sells water to District of Columbia customers.

In addition to the above, six (6) consecutive PWSs were actively operating during calendar year 2016 in the District, were subject to the requirements of the SDWA and performed compliance monitoring. These systems, which purchase water from DC Water, are: Hubert H. Humphrey, Mandarin Oriental Hotel, Naval Station Washington (i.e., Washington Navy Yard), Naval Observatory, Anacostia – Joint Base Anacostia Bolling (JBAB) (*previously known as Naval Station Washington – Anacostia*), Bolling – JBAB (*previously known as Bolling Air Force Base*.) The adjoining but separate military installations previously known as Naval Support Facility Anacostia and Bolling Air Force Base were consolidated to be Joint Base Anacostia

Bolling (JBAB) in October 2010, but EPA has retained the two separate public water systems for the two installations because the ownership structure of the water systems remains distinct.

Hubert H. Humphrey was a regulated public water system from September 19, 2016 until March 16, 2017 when water treatment systems in the building were removed and Hubert H. Humphrey ceased to operate as a public water system.

Maximum Contaminant Level Violations

Under the Safe Drinking Water Act, the EPA sets national limits on contaminant levels in drinking water to ensure that the water is safe for human consumption. These limits are known as Maximum Contaminant Levels (MCLs).

During calendar year 2016, no MCL violations occurred at any of the PWSs in the District of Columbia.

Maximum Residual Disinfectant Level Violations

The EPA sets national limits on residual disinfectant levels in drinking water to reduce the risk of exposure to disinfection byproducts formed when public water systems add chemical disinfectant for either primary or residual treatment. These levels are known as Maximum Residual Disinfectant Levels (MRDLs).

During calendar year 2016, no MRDL violations occurred at any of the PWSs in the District of Columbia.

Treatment Technique Violations

For some regulations, the EPA establishes treatment techniques (TTs) in lieu of an MCL to control unacceptable levels of certain contaminants. For example, treatment techniques have been established for viruses, some bacteria, and turbidity. In addition, the Lead and Copper Rule (LCR) specifies two types of activities - providing educational materials on lead to water system customers and replacement of water service lines that are lead - which must be performed by systems that exceed the lead action level. These activities are considered treatment technique requirements under the LCR.

Four treatment technique violations are included in the Calendar Year 2016 Violation Summary in Appendix A.

Monitoring and Reporting Violations

A PWS is required to monitor and verify that the levels of contaminants present in the water do not exceed the MCLs or MRDLs or violate treatment techniques. If a PWS fails to have

its water tested as required or fails to report test results correctly to the primacy agency, a monitoring violation occurs.

Monitoring for most chemical contaminants is done at the point(s) where water from the water treatment plant(s) enters the water storage and distribution system. The exceptions are bacteriological contaminants, disinfection byproducts, asbestos, and lead and copper which are monitored at specific locations in the distribution system.

Nineteen monitoring and reporting violations are included in the Calendar Year 2016 Violation Summary in Appendix A.

Significant Monitoring Violations

Significant monitoring violations are defined as any significant monitoring violation that occurred during the calendar year of the compliance report. A significant monitoring violation, with rare exceptions, occurs when samples were not taken or results were not reported during a compliance period.

One significant monitoring violation is included in the Calendar Year 2016 Violation Summary in Appendix A.

Consumer Notification Violations

Every Community Water System is required by the Consumer Confidence Report (CCR) Rule to deliver to its customers a brief annual water quality report. This report includes some educational material and provides information on the source water, the levels of any detected contaminants, and compliance with drinking water regulations.

One violation of the CCR Rule is included in the Calendar Year 2016 Violation Summary in Appendix A.

Significant Consumer Notification Violations

A significant consumer notification violation occurs if a community water system completely failed to provide for its customers the required CCR.

During calendar year 2016, no significant consumer notification violations occurred at any of the community water systems in the District of Columbia.

Public Notice Violations

The Public Notification (PN) Rule requires all PWSs to notify their consumers any time a PWS violates a national primary drinking water regulation or has a situation posing a risk to public health. Notices must be provided to persons served (not just billing customers).

During calendar year 2016, four violations of the PN Rule are included in the Calendar Year 2016 Violation Summary in Appendix A.

Significant Public Notice Violations

For this report, significant public notification violation occurs when a PWS completely fails to notify its consumers that the PWS violated a national primary drinking water regulation or had a situation posing a risk to public health.

During calendar year 2016, no significant public notice violations occurred at any of the community water systems in the District of Columbia.

Other Violations

One violation is included in the Calendar Year 2016 Violation Summary in Appendix A which was not previously described in the categories above.

The water system Bolling - JBAB failed to notify EPA in 2011 prior to an increase of the capacity of the water system. Pursuant to EPA consent order issued August 16, 2012, Bolling - JBAB was required to create and submit a Corrective Plan to EPA related to an increase of the capacity of the water system, and was required to include a timeline for completion. Bolling - JBAB reported that the designated tasks in the Corrective Plan have been completed with respect to the increased capacity of the water system. All tasks in the Corrective Plan were resolved effective May 10, 2016.

Variances and Exemptions

A primacy state/agency can grant to a PWS a variance from a primary drinking water regulation if the characteristics of the raw water sources reasonably available to the PWS do not allow the system to meet the MCL.

A primacy state/agency can also grant an exemption temporarily relieving a PWS of its obligation to comply with an MCL or treatment technique or both if the system's noncompliance results from compelling factors (which may include economic factors) and the system was in operation on the effective date of the MCL or treatment technique requirement.

Although variances and exemptions to specific requirements under the Safe Drinking Water Act Amendments of 1996 may be granted under certain circumstances, EPA has never issued any variances or exemptions to the public water systems in the District of Columbia.

Waivers

A primacy state/agency can grant a waiver to a PWS from a monitoring requirement if the PWS is not vulnerable to a contaminant and waiver of the contaminant is allowable under the regulations. In 2015, EPA granted an asbestos monitoring waiver to three water systems, Washington Navy Yard, Anacostia – JBAB, and Mandarin Oriental Hotel for the monitoring period of 2015 to 2016. During 2017, these three water systems will be required to perform asbestos compliance monitoring.

No waivers of any other contaminant monitoring have been granted by EPA to public water systems in the District of Columbia for monitoring required by the national primary drinking water regulations.

DISTRICT OF COLUMBIA INFORMATION

Public Water Systems in the District of Columbia

There are two principal public water systems in the District of Columbia: 1) the Washington Aqueduct Division of the U.S. Army Corps of Engineers (the Aqueduct); and, 2) the District of Columbia Water and Sewer Authority (DC Water). The Aqueduct owns and operates two water intakes on the Potomac River in Maryland, two water treatment plants in the District of Columbia, and three finished water storage reservoirs. The treatment plants, Dalecarlia and McMillan, can produce up to 340 million gallons per day (MGD) of potable water for the metropolitan Washington area.

The Aqueduct is a water wholesaler, and as such, has no distribution system of its own. Its primary customer is DC Water, which owns and operates eight finished water storage facilities and the water distribution system within the District. DC Water does not further treat the water in any way. (It should be noted that prior to the creation of the DC Water and Sewer Authority on October 1, 1996, the water distribution system was owned and operated by the former Water and Sewer Utility Administration (WASUA) which was part of the District of Columbia Department of Public Works.)

During 2016, five (5) facilities in the District purchased water from DC Water and were consecutive PWSs subject to the requirements of the SDWA: Mandarin Oriental Hotel, Naval Station Washington (Washington Navy Yard), Naval Observatory, Anacostia - JBAB, and Bolling - JBAB. *(Note: The adjoining but separate military installations previously known as Naval Station Washington - Anacostia and Bolling Air Force Base were consolidated to be Joint Base Anacostia Bolling (JBAB) in October 2010, but EPA has retained the two separate public water systems for the two installations because the ownership structure of the water systems remains distinct.)* None of the Navy or Air Force facilities provided additional water treatment for water provided to its consumers in 2016.

In addition to DC Water, the Aqueduct supplies water to three customer PWSs in the Commonwealth of Virginia: Arlington County, Fairfax County, and Ronald Reagan Washington National Airport. These customer water systems are regulated by the Virginia Department of Health which has primacy for implementation of the PWSS Program in the Commonwealth.

For reference in SDWIS, the water systems are listed below along with their PWS identification numbers:

DC0000001	Washington Aqueduct
DC0000002	District of Columbia Water and Sewer Authority
DC0000003	Naval Station Washington (Washington Navy Yard)
DC0000004	Anacostia – Joint Base Anacostia-Bolling *(Note: Known as Naval Station Washington – Anacostia prior to October 2010.)*
DC0000005	Naval Observatory

DC0000007	Bolling – Joint Base Anacostia-Bolling *(Note: Known as Bolling Air Force Base prior to October 2010.)*
DC0000010	Mandarin Oriental Hotel
DC0000011	Hubert H. Humphrey (*Note: This system was a regulated public water system from September 19, 2016 until March 16, 2017. EPA confirmed that Hubert H. Humphrey removed its water treatment systems and ceased operations as a public water system.)*
VA6013010	Arlington County Department of Public Works
VA6013080	Ronald Reagan Washington National Airport
VA6059501	Fairfax County Water Authority

The Aqueduct produces an average of 180 MGD of drinking water for the water systems listed above which have a total population of about one million. The District, with a total population of approximately 600,000, consumes about 75 percent of the Aqueduct's production. Although the District has about 60 percent of the population served by the Aqueduct, it uses more water because it has a large transient population of commuters and tourists.

Because the Aqueduct and DC Water have individual responsibilities for complying with the SDWA, both systems work together to ensure that the District's drinking water meets federal standards. The Aqueduct is responsible for compliance with all of the regulations which pertain to water treatment such as filtration, disinfection and chemical contaminant removal, and corrosion control. DC Water is responsible for the regulations for Total Coliform bacteria, lead and copper, asbestos, and disinfection byproducts, which are applicable to the distribution system. The water treatment techniques applied by the Aqueduct directly affect the quality of the water in DC Water's system. The distribution system operation and maintenance activities conducted by DC Water also directly affect the quality of water delivered to its customers.

The Aqueduct provides significant formal and informal assistance to DC Water in complying with the monitoring and reporting requirements of the SDWA. The Aqueduct collects and provides analytical services for all of the required distribution system entry point samples for organic and inorganic chemical contaminants, which satisfies the requirements for itself as well as its customer PWSs. In addition, the Aqueduct provides contractual laboratory services for DC Water, analyzing all of the bacteriological and disinfection byproduct samples collected from DC Water's distribution system. Responsibility for compliance with lead and copper monitoring is split between the Aqueduct and DC Water. DC Water arranges for the collection of lead and copper samples at customers' taps and the Aqueduct laboratory performs the analyses as provided by its contract with DC Water. The Aqueduct and DC Water staff also collect and analyze the distribution system samples required for the assessment of optimal corrosion control treatment. On an annual basis, the Aqueduct's laboratory collects and analyzes over 35,000 samples for more than 125 parameters.

The Aqueduct compiles the results of the analyses of compliance samples. The Aqueduct includes this data in the monthly monitoring report it submits to EPA Region III. Other data is forwarded to DC Water for use in preparing its monitoring reports, which are also submitted to EPA Region III.

Lead and Copper Rule Compliance Actions

A discussion of DC Water's Lead and Copper Rule (LCR) compliance actions for calendar year 2016 is provided below. For additional information on DC Water's compliance with the LCR, please see the Annual Compliance Reports for the District of Columbia for years 2004 through 2015. If the Annual Compliance Reports for these years are not available at the website, https://www.epa.gov/ccr/annual-drinking-water-compliance-report-district-columbia, then the EPA web archive of these reports can be found using the following websites:

2004	https://archive.epa.gov/reg3wapd/archive/web/pdf/2004dc_compliance.pdf
2005	https://archive.epa.gov/reg3wapd/archive/web/pdf/2005dc_compliance.pdf
2006	https://archive.epa.gov/reg3wapd/archive/web/pdf/2006dc_compliance.pdf
2007	https://archive.epa.gov/reg3wapd/archive/web/pdf/2007dc_compliance.pdf
2008	https://archive.epa.gov/reg3wapd/archive/web/pdf/2008acrfordcfinal.pdf
2009	https://archive.epa.gov/reg3wapd/archive/web/pdf/2009acrfordc_final6_23_10.pdf
2010	https://archive.epa.gov/reg3wapd/archive/web/pdf/2010dc_compliance.pdf
2011	https://archive.epa.gov/reg3wapd/archive/web/pdf/2011acrfordc062812.pdf
2012	https://archive.epa.gov/reg3wapd/archive/web/pdf/2012acrfordc062513.pdf
2013	https://archive.epa.gov/reg3wapd/archive/web/pdf/2013acrfordcfin6_26_14.pdf
2014	https://archive.epa.gov/reg3wapd/archive/web/pdf/2014acrfordc063015.pdf
2015	https://www.epa.gov/sites/production/files/2016-06/documents/2015_annual_dc_drinking_water_compliance_report.pdf

More information and links to additional resources are also available on the EPA website: https://archive.epa.gov/region03/dclead/web/html/index.html.

Lead and Copper Tap Sampling

After exceeding the lead action level (AL) from 2002 through 2004, DC Water was required to conduct full monitoring for lead and copper at customers' taps beginning in 2004. DC Water has met the lead AL of 0.015 mg/L for all monitoring periods since 2005. DC Water continued to perform full monitoring for lead and copper in 2016, meeting the lead action level for both monitoring periods (90^{th} percentile results of 0.002 mg/L for January 1 to June 30 monitoring period and 0.003 mg/L for July 1 to December 31 monitoring period). DC Water did not exceed the copper AL of 1.3 mg/L in any of these monitoring periods. The 90^{th} percentile copper results for calendar year 2016 were 0.082 mg/L for the January 1 to June 30 monitoring period and 0.078 for the July 1 to December 31 monitoring period.

Corrosion Control Treatment

In February 2004, EPA Region III convened a Technical Expert Working Group (TEWG), comprising representatives from DC Water, the Washington Aqueduct, EPA, the Department of Health, the D.C. Department of the Environment, and the Centers for Disease Control and

Prevention, to coordinate research and communications. In April 2004, the TEWG recommended that the Aqueduct implement the application of an orthophosphate corrosion inhibitor as a method to reduce the drinking water lead levels. The Aqueduct began adding an orthophosphate corrosion inhibitor (phosphoric acid) to the entire system in August 2004 and continues this treatment today. In 2006, EPA approved application of an orthophosphate corrosion inhibitor as the final optimal corrosion control treatment. No changes to the corrosion control treatment have been made since 2006.

PWSS Program Activities in the District of Columbia

EPA Region III's Water Protection Division works closely with the Washington Aqueduct, DC Water, the Navy facilities, Joint Base Anacostia-Bolling, and Mandarin Oriental Hotel in the implementation of the PWSS Program in the District. Region III has in the past provided, and in some cases continues to provide, services to the District such as the following:

- Training for water treatment plant and distribution system operators;
- Sanitary surveys of the water treatment, storage and distribution systems;
- Assistance to the DC government in conducting a source water assessment of the Potomac River.

Specifically, during calendar year 2016, Region III:

- Developed and provided comprehensive monitoring guidance and other resources, including emergency preparedness and response resources, to all public water systems in the District;
- Issued notices of non-compliance for the monitoring violations described previously (see: "Definitions and Summary of 2016 Data");
- Reviewed drinking water regulations as they apply to locations having installed additional treatment;
- Reviewed changes to compliance monitoring locations;
- Provided compliance assistance to Hubert H. Humphrey to aid the PWSs in understanding requirements of regulated public water systems and to help the facility prepare monitoring plans;
- With contractors, performed a sanitary survey of the Washington Naval Station and Naval Observatory;
- Reviewed drafts of the Consumer Confidence Reports (CCRs) produced by DC Water, Anacostia - JBAB, Bolling - JBAB, and the Washington Navy Yard water systems and reviewed draft public notices as needed throughout the year, ensuring that required language was included and the public was appropriately informed;
- Continued to work with the Aqueduct, DC Water, and Virginia customers concerning water system security issues;
- Remained committed to source water protection efforts through continued participation with the Potomac River Basin Drinking Water Source Protection Partnership and planning for a revised Source Water Assessment;
- Participated in, and conducted with contractors, functional and tabletop readiness exercises;

- Prepared Standard Operating Procedures and content for Sampling Training with contractors;
- Maintained and upgraded database software, SDWIS State, for storage of drinking water system data and information;
- Provided clarification to consecutive systems regarding monitoring requirements;
- Prepared water system compliance assistance information for the Revised Total Coliform Rule and performed Level 2 Assessments at Washington Naval Station and;
- Responded to scenarios requiring prompt notification of EPA due to incidents, violations or other emerging situations.

ACCESS TO COPIES OF 2016 ANNUAL COMPLIANCE REPORT FOR PUBLIC WATER SYSTEMS

As required by the Safe Drinking Water Act, EPA Region III has made the 2016 Annual Compliance Report for Public Water Systems available to the public. Interested individuals can obtain a copy of the 2016 Annual Public Water Systems Report for the District of Columbia by accessing:

Website: https://www.epa.gov/ccr/annual-drinking-water-compliance-report-district-columbia

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APPENDIX A: CALENDAR YEAR 2016 VIOLATION SUMMARY FOR THE DISTRICT OF COLUMBIA

Violation Report Definitions

Violation: A failure to meet any state or federal drinking water regulation.

MCL: Maximum Contaminant Level – The highest amount of a contaminant that EPA allows in drinking water. MCLs ensure that drinking water does not pose either a short-term or long-term health risk.

Monitoring: EPA specifies which water testing methods the water systems must use, and sets schedules for the frequency of testing. A water system that does not follow EPA's schedule or methodology is in violation [40 CFR 141]. States must report monitoring violations that are significant as determined by the EPA Administrator and in consultation with the States.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water

Consumer Notification: A required process for providing information to customers of a public water system

SDWIS Code: Specific numeric codes from the Safe Drinking Water Information System (SDWIS) have been assigned to each violation type included in this report. The violations to be reported include exceeding contaminant MCLs, failure to comply with treatment requirements, and failure to meet monitoring and reporting requirements. Four-digit SDWIS Contaminant Codes have also been included in the chart for specific contaminants.

RTC: Returned to Compliance

Contaminant, Rule and SDWIS Code Definitions

CCR: Consumer Confidence Report – The annual report on water quality which must be distributed to customers of a community water system.

CCR Report: SDWIS Violation Code 71 indicates a failure to provide this report to customers of a community water system and the primacy agency.

CCR Adequacy/Availability/Content: SDWIS Violation Code 72 indicates delivery of a CCR that is significantly deficient in content to the extent that the CCR does not meet the requirements of the SDWA and the Federal regulations.

DBP: Disinfectant and Disinfection Byproduct Rules – Disinfectants such as chlorine, chloramine and chlorine dioxide are regulated by EPA. SDWIS Violation Code 13 indicates an acute MRDL violation. Disinfectant Byproducts including chlorite and two groups of disinfection byproducts are regulated by EPA.

TTHM: Total Trihalomethanes – SDWIS Contaminant Code 2950 is the sum of four (4) regulated trihalomethane species.

HAA5: Haloacetic Acids (sum of 5) – SDWIS Contaminant Code 2456 is the sum of five (5) regulated haloacetic acids. SDWIS Violation Code 27 indicates a monitoring violation.

GWR: Ground Water Rule - Establishes criteria under which water systems supplied by ground water sources, must monitor and/or disinfect their water [40 CFR 141, Subpart S]. Some of the violations of the Ground Water Rule that are to be reported include the following:

Failure to notify: SDWIS Violation Code 5 indicates failure to notify the State that it failed to meet State-specified requirements at a system conducting compliance monitoring.

Monitoring, routine: SDWIS Violation Code 31 indicates a system's failure to carry out required disinfectant water tests, or to report the results of those tests.

Failure to provide treatment: SDWIS Violation Code 42 shows a system's failure to properly treat its water in response to a positive source water sample.

Treatment techniques: SDWIS Violation Code 45 shows a system's failure to develop within 120 days and/or comply with an approved compliance schedule to correct a sanitary survey significant deficiency.

IOC: Inorganic Contaminant - Non-carbon-based compounds such as metals, nitrates, and asbestos. These contaminants are naturally-occurring in some water, but can get into water through farming, chemical manufacturing, and other human activities. EPA has established MCLs for 15 inorganic contaminants [40 CFR 141.62].

Failure to monitor: SDWIS Violation Code 3 indicates a system's failure to carry out routine monitoring, or to report the results of routine monitoring

LCR: Lead and Copper Rule - This rule established national limits on lead and copper in drinking water [40 CFR 141.80-91]. Lead and copper corrosion pose various health risks when ingested at any level, and can enter drinking water from household pipes and plumbing fixtures. States report violations of the Lead and Copper Rule in the following categories:

Failure to prepare LCR monitoring plan: SDWIS Violation Code 9 indicates a system that fails to retain on its premises original records of all sampling data and analyses, reports, surveys, letters, evaluations, schedules, State determinations, and any other information for no fewer than 12 years.

Initial lead and copper tap M/R: SDWIS Violation Code 51 indicates that a system did not meet initial lead and copper testing requirements, or failed to report the results of those tests to the State.

Follow-up or routine lead and copper tap M/R: SDWIS Violation Code 52 indicates that a system did not meet follow-up or routine lead and copper tap testing requirements, or failed to report the results.

Treatment installation: SDWIS Violation Codes 58 AND 62 indicate a failure to install optimal corrosion control treatment system (58) or source water treatment system (62) which would reduce lead and copper levels in water at the tap. [One number is to be reported for the sum of violations in these two categories].

Public education: SDWIS Violation Code 65 shows that a system did not provide required public education about reducing or avoiding lead intake from water.

Consumer notice: SDWIS Violation Code 66 shows that a system did not provide notice of lead results to individuals served by taps used for lead and copper tap monitoring.

LSLR: Lead Service Line Replacement – SDWIS Violation Code 64 indicates that a system required to replace lead service lines did not meet the lead service line replacement requirements of the Lead and Copper Rule.

PN: Public Notification - Notification that water systems must provide to their customers upon discovering any violation of a contaminant standard. SDWIS Violation Code 75 indicates that a system required to provide public notice fails to provide notice to persons served by the water system.

RAD: Radionuclides - Radioactive particles which can occur naturally in water or result from human activity. EPA has set legal limits on the following types of radionuclides: radium-226, radium-228, uranium, gross alpha, and beta particle/photon radioactivity [40 CFR 141.66]. Violations for these contaminants are to be reported using the following categories:

Gross alpha: SDWIS Contaminant Code 4000 for alpha radiation above MCL of 15 picocuries/liter (pCi/L). Gross alpha includes radium-226 but excludes radon and uranium.

Combined radium-226 and radium-228: SDWIS Contaminant Code 4010 for combined radiation from these two isotopes above MCL of 5 pCi/L.

Uranium: SDWIS Contaminant Code 4006 for uranium levels above MCL of 30 micrograms per liter (μg/L).

Gross beta: SDWIS Contaminant Code 4101 for beta particle and photon radioactivity from man-made radionuclides above 4 millirem/year.

SOC or VOC: Synthetic Organic Contaminant or Volatile Organic Contaminant - Organic contaminants are carbon-based compounds, such as industrial solvents and pesticides. These contaminants generally get into water through runoff from cropland or discharge from factories. EPA has set legal limits on 54 organic contaminants that are to be reported [40 CFR 141.61].

SWTR: Surface Water Treatment Rule - Establishes criteria under which water systems supplied by surface water sources, or ground water sources under the direct influence of surface water, must filter and disinfect their water [40 CFR 141, Subpart H]. Violations of the Surface Water Treatment Rule are to be reported for the following categories:

Monitoring, routine/repeat (for filtered systems): SDWIS Violation Code 36 indicates a system's failure to carry out required tests, or to report the results of those tests.

Treatment techniques (for filtered systems): SDWIS Violation Code 41 shows a system's failure to properly treat its water.

Monitoring, routine/repeat (for unfiltered systems): SDWIS Violation Code 31 indicates a system's failure to carry out required water tests, or to report the results of those tests.

Failure to filter (for unfiltered systems): SDWIS Violation Code 42 shows a system's failure to properly treat its water. Data for this violation code will be supplied to the States by EPA.

LT2ESWTR: Long-Term 2 Enhanced Surface Water Treatment Rule- Establishes criteria under which water systems supplied by surface water sources or ground water systems under the direct influence of surface water, to monitor their source water; calculate an average *Cryptosporidium* concentration, and use those results to determine if their source water is vulnerable to contamination and may require addition treatment.

Sanitary survey: SDWIS Violation Code 45 shows a system's failure to develop within 45 days and/or comply with an approved compliance schedule to correct a sanitary survey significant deficiency.

RTCR: Revised Total Coliform Rule - Establishes regulations for microbiological contaminants in drinking water to initiate a "find and fix" approach to address fecal contamination that could enter the distribution system. It requires public water systems to perform assessments to identify sanitary defects and take action to correct them. These contaminants can cause short-term health problems. If no samples are collected during the one-month compliance period, a significant monitoring violation occurs. States are to report the following categories of violations:

Reporting/Assessment Forms: SDWIS Violation Code 4A shows a system's failure to timely submit a completed assessment form.

Sample Siting Plan Errors: SDWIS Violation Code 5A shows a system's failure to develop a written sample siting plan that identifies sampling sites and a sample collection schedule that are representative of water throughout the distribution system.

Acute MCL violation: SDWIS Violation Code 21 indicates that the system found fecal coliform or *E. coli*, potentially harmful bacteria, in its water, thereby violating the rule.

Non-acute MCL violation: SDWIS Violation Code 22 indicates that the system found Total Coliform in samples of its water at a frequency or at a level that violates the rule. For systems collecting fewer than 40 samples per month, more than one positive sample for Total Coliform is a violation. For systems collecting 40 or more samples per month, more than 5% of the samples positive for Total Coliform is a violation.

Monitoring, Major routine and follow-up: SDWIS Violation Codes 23 AND 25 show that a system failed to collect all of the required samples including routine or repeat.

Table 1. Calendar Year 2016 Violation Status Summary for the District of Columbia

Only major monitoring violations are included in the tables of Appendix A. Any other minor monitoring and reporting violations not included in Annual Compliance Report totals listed in the tables of Appendix A would be identified separately in Appendix B.

Contaminant or Rule	No. of MCL Viol.	No. of MCL Viol. RTC	No. of PWS with MCL Viol.	No. of Monit. and Report Viol.	No. of Monit.and Report Viol. RTC	No. of PWS with Monit. and Report Viol.	No. of TT Viol.	No. of TT Viol. RTC	No. of PWS with TT Viol.	No. of Consum. Notice Viol.	No. of Consum. Notice Viol. RTC	No. of PWS with Consum. Notice Viol.
IOC	0	0	0	5	3	2						
RAD	0	0	0	0	0	0						
SOC	0	0	0	0	0	0						
VOC	0	0	0	0	0	0						
RTCR	0	0	0	3	0	3						
LCR				7	1	5	0	0	0			
SWTR				3	1	2	4	1	4			
DBP	0	0	0	1	0	1	0	0	0			
GWR	0	0	0	1	1	1	0	0	0			
CCR										1	1	1
PN										4	4	2
Grand Total	0	0	0	20	6	5	4	1	4	5	5	2

Table 1 Notes:
1. A shaded box in Table 1 indicates that the violation type is not applicable to a contaminant or rule.
2. “No. of Viol.” refers to the number of violations of a specific type for each rule during calendar year 2016
3. “No. of Viol. RTC” refers to the number of violations that have been returned to compliance as of the end of calendar year 2016
4. “No. of PWS with Viol.” refers to the number of public water systems in the District of Columbia which had a specific type of violation for a rule during calendar year 2016
5. A single PWS may have violations for multiple contaminants or rules; therefore, the grand total of “No. of PWS with Viol.” may not equal the sum of values in the proceeding rows.

Table 2. Annual Compliance Report totals for calendar year 2016

Total number of regulated systems	8
Total number of systems with violations	5
Total number of violations	29
Total number of violations returned to compliance as of December 31, 2016	12[1]

Table 2 Notes:

[1] In addition to the 12 violations that were returned to compliance during calendar year 2016, there are 14 violations that have been returned to compliance as of June 30, 2017.

Table 3. Violation Details by PWS

System name	PWS ID	Population	SDWIS Contaminant Code	Contaminant or Rule	SDWIS Violation Code	Compliance Period Begin Date	Compliance Period End Date	Violation ID
Bolling – Joint Base Anacostia-Bolling	DC0000007	12,499	0700	Groundwater Rule	5[1]	04/28/2011[1]	N/A	13
Bolling – Joint Base Anacostia-Bolling	DC0000007	12,499	0800	LT2ESWTR	45	12/31/2009	N/A	14
Bolling – Joint Base Anacostia-Bolling	DC0000007	12,499	5000	LCR	66	12/01/2015	N/A	20
Mandarin Oriental	DC0000010	780	1040	Nitrate	3	10/01/2015	12/31/2015	1
Mandarin Oriental	DC0000010	780	0200	SWTR	36	08/01/2016	08/31/2016	3
Mandarin Oriental	DC0000010	780	5000	LCR	66	04/01/2015	N/A	4
Mandarin Oriental	DC0000010	780	5000	LCR	66	10/01/2015	N/A	5
Naval Observatory	DC0000005	250	7500	Public Notice	75	05/26/2015	N/A	7
Naval Observatory	DC0000005	250	7500	Public Notice	75	05/26/2015	N/A	8
Naval Observatory	DC0000005	250	8000	RTCR	5A	04/01/2016	N/A	10
Naval Observatory	DC0000005	250	5000	LCR	66	12/31/2016	N/A	11
Naval Observatory	DC0000005	250	0800	LT2ESWTR	45	11/01/2016	N/A	12

System name	PWS ID	Population	SDWIS Contaminant Code	Contaminant or Rule	SDWIS Violation Code	Compliance Period Begin Date	Compliance Period End Date	Violation ID
Naval Station Washington	DC0000003	15,690	7500	Public Notice	75	05/26/2015	N/A	13
Naval Station Washington	DC0000003	15,690	7500	Public Notice	75	05/26/2015	N/A	14
Naval Station Washington	DC0000003	15,690	7000	CCR	72	07/01/2016	09/12/2016	15
Naval Station Washington	DC0000003	15,690	5000	LCR	66	12/31/2016	01/25/2017	17
Naval Station Washington	DC0000003	15,690	0800	LT2ESWTR	45	11/01/2016	N/A	18
Naval Station Washington	DC0000003	15,690	8000	RTCR	4A	12/10/2016	N/A	19
Hubert H. Humphrey	DC0000011	1,400	0200	SWTR	36	11/01/2016	11/30/2016	1
Hubert H. Humphrey	DC0000011	1,400	0200	SWTR	36	12/01/2016	12/31/2016	2
Hubert H. Humphrey	DC0000011	1,400	0200	SWTR	41	12/01/2016	12/31/2016	5
Hubert H. Humphrey	DC0000011	1,400	8000	RTCR	5A	10/01/2016	N/A	8
Hubert H. Humphrey	DC0000011	1,400	1040	Nitrate	03	07/01/2016	09/30/2016	9
Hubert H. Humphrey	DC0000011	1,400	1041	Nitrite	03	07/01/2016	09/30/2016	10
Hubert H. Humphrey	DC0000011	1,400	1040	Nitrate	03	10/01/2016	12/31/2016	11
Hubert H. Humphrey	DC0000011	1,400	1041	Nitrite	03	10/01/2016	12/31/2016	12
Hubert H. Humphrey	DC0000011	1,400	5000	LCR	09	09/30/2016	N/A	13

System name	PWS ID	Population	SDWIS Contaminant Code	Contaminant or Rule	SDWIS Violation Code	Compliance Period Begin Date	Compliance Period End Date	Violation ID
Hubert H. Humphrey	DC0000011	1,400	5000	LCR	66	07/01/2016	12/31/2016	14
Hubert H. Humphrey	DC0000011	1,400	0400	DBP	27	11/01/2016	N/A	15

Table 3 Notes:

[1] The violation code used represents lack of notification of compliance monitoring. This violation was a violation of lack of notification of expansion of water system.

APPENDIX B:
MINOR MONITORING AND REPORTING VIOLATIONS NOT INCLUDED IN ANNUAL COMPLIANCE REPORT TOTALS

Contaminant, Rule and SDWIS Code Definitions

TCR: Total Coliform Rule - Establishes regulations for microbiological contaminants in drinking water. These contaminants can cause short-term health problems.

Monitoring, Minor routine and follow-up: SDWIS Violation Codes 24 AND 26 show that a system failed to collect some of the required samples including routine or repeat.

Table 1. Minor Monitoring and Reporting Violation Details by PWS

There were no minor violations for the Calendar Year 2016.