

**Sussex Water Department (PWSID # NJ1921001)
1182 Route 23, Wantage, NJ 07461
Year 2018 Annual Quality Report**

Dear Consumer:

During calendar year 2018, the Sussex water supply was tested for over 80 contaminants that might be found in water. These tests included items ranging from taste and odor to bacteriological and chemical contaminants. The United States Environmental Protection Agency (USEPA) and the New Jersey Department of Environmental Protection (NJDEP) set health and safety standards for public water supplies.

This annual Consumer Confidence Report (CCR), required by the Safe Drinking Water Act (SDWA), provides additional information on our sources of supply and the quality of the water we deliver. For more information on this report or about the next opportunity for public participation in decisions concerning drinking water, please contact;

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973-998-9100

The Borough of Sussex Water Department is a Municipal Department. The Municipal Mayor and Council 2019 meeting dates are as follows;

- Tuesday, July 16
- Tuesday, August 13
- Tuesday, September 3
- Tuesday, September 17
- Tuesday, October 1
- Tuesday, October 15
- Tuesday, November 5
- Tuesday, November 19
- Tuesday, December 3
- Tuesday, December 17
- Thursday, January 2, 2020 (Reorganization Meeting)

Meetings are held at the Municipal Building, 2 Main Street, Sussex, New Jersey, all starting at 7:00 PM.

General Information

Rivers, lakes, streams, ponds, reservoirs, springs and wells are sources for both tap water and bottled water. As water travels over the surface of land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and picks up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

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

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

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

Health and Educational Information

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

Special Considerations Regarding Children, Pregnant Women, Nursing Mothers, and Others

Children may receive a slightly higher amount of a contaminant present in the water than do adults, on a body weight basis, because they may drink a greater amount of water per pound of body weight than do adults. For this reason, reproductive or developmental effects are used for calculating a drinking water standard, especially if these effects occur at lower levels than other health effects of concern. If there is insufficient toxicity information for a chemical (for example, lack of data on reproductive or developmental effects), an extra uncertainty factor may be incorporated into the calculation of the drinking water standard, thus making the standard more stringent, to account for the additional uncertainties regarding these effects. In the case of lead and nitrate, effects on infants and children are the health endpoints upon which the standard is based.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Sussex Water Department is responsible for providing high quality drinking water but water systems cannot control the variety of materials used in plumbing components.

When your water has been sitting for several hours, you can minimize the potential for lead exposure

by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>

ADDITIONAL SPECIAL NOTICE ON LEAD

Lead: Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that the lead levels at your home may be higher than at other homes in your community as a result of materials used in your home plumbing. If you are concerned about elevated lead levels in your home water, you may wish to have your tap water tested, and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the SAFE DRINKING WATER HOT LINE (1-800-426-4791). Adults who drink this water over many years could develop kidney problems and high blood pressure.

WATER SUPPLIED BY THE SUSSEX WATER DEPARTMENT IS IN COMPLIANCE WITH LEAD AND COPPER BASED ON THE 90TH PERCENTILE RESULT. ALL INDIVIDUAL LEAD AND COPPER SAMPLES WERE ALSO BELOW THE ACTION LEVEL.

Sources of Supply

Our water source is Lake Rutherford, a surface water supply, located in the High Point State Park. Water from Lake Rutherford flow to the Colesville Reservoir for interim storage prior to entering the Water Treatment Plant for processing.

The MCL's listed in the following tables are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink two liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Microbiological Contaminants

Regulated Contaminant	Units	COMPLIANCE ACCHIEVED	MCLG	MCL	Highest Level	Source of Contamination
Total Coliform Bacteria	# per 100 ml	Yes	0	1 positive sample per month	0	Coliform are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present.

+The Sussex Water Department collects 2 routine total coliform samples per month.

PRIMARY CONTAMINANTS

Regulated Contaminant	Units	COMPLIANCE ACCHIEVED	MCL	Highest Level	% of Samples <0.3 NTU	Range Detected	Source of Contamination
Turbidity*	NTU	No	TT (% of samples <0.3 NTU) Minimum 95% Required	3.907	88.7% in January 2018	0.023 – 3.907 NTU	Soil Runoff

* Turbidity is a measure of the cloudiness of the water and is monitored as an indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

Inorganic Contaminants

Regulated Contaminant	Unit	Compliance Achieved	MCLG	MCL	Highest Result	Source of Contaminants/comments
Barium	PPM	Yes	2	2	0.0107	Discharge of drilling wastes; discharge from metal refineries, and erosion of natural deposits.
Beryllium	PPM	Yes	4	4	<0.00025	Discharge from metal refineries and coal-burning factories, discharge from electrical, aerospace, and defense industries

Lead and Copper Rule

Regulated Contaminant	Units	COMPLIANCE ACCHIEVED	Action Level	Highest Detected		90 th Percentile Result		Source of Contamination
				01-06	06-12	01-06	06-12	
Lead	PPB	Yes	15	<02	<2	0	0	Erosion of natural deposits, discharge of drilling waste and discharge from metal refineries.
Copper	PPM	Yes	1.3	0.098	0.0812	0.091	0.027	Erosion of natural deposits.

LEAD AND COPPER. COMPLIANCE WITH THE LEAD AND COPPER RULE IS BASED ON THE 90TH PERCENTILE RESULT FROM POINTS OF USE IN THE DISTRIBUTION SYSTEM COLLECTED IN 2018. SUSSEX WATER IS ON A MONITORING SAMPLE OF TWENTY SAMPLES EVERY SIX MONTHS.

REGULATED DISINFECTANTS and DISINFECTION BYPRODUCTS

Stage 2 Disinfection Byproducts Note: Stage 2 DBP compliance for TTHM's and HAA5's is based on the locational running average (LRAA) calculated at each monitoring location.

Regulated Contaminant	UNIT	COMPLIANCE ACCHIEVED	Highest Detected LRAA	Range Detected	MCL as a LRAA	MCLG	Source of Contamination/ and Comments
Total Trihalomethanes (TTHM) Stage 2	PPB	Yes	57.115	38.8 – 94.8	80	NA	Byproduct of water disinfection. / TTHM compliance is based on Locational Running Annual Average.
Haloacetic Acids (HAA5) Stage 2	PPB	Yes	19.6825	0 – 20.2	60	NA	Byproduct of water disinfection. / HAA5 compliance is based on Locational Running Annual Average.
Chlorite (Distribution)	PPM	Yes	0.446	0.058-0.446	1.0	0.8	Byproduct of water disinfection.
Chlorite (Point of Entry)	PPM	Yes	0.88	0.11 – 0.88	1.0	0.8	Byproduct of water disinfection.

Disinfectants

Regulated Contaminant DISTRIBUTION	Units	Compliance Achieved	MRDLG	MRDL	Highest Detected Monthly Average	Range Detected Monthly Average	Source of contamination
Chlorine as CL2	PPM	Yes	4	4	0.84	0.21-0.84	Chlorine is used as a drinking water disinfectant.
Regulated Contaminant POINT OF ENTRY	Units	Compliance Achieved	Minimum	Annual Average	Highest Detected	Range Detected	Source of contamination
Chlorine Dioxide	PPM	Yes	0.8	0.8	.71	<0.02 – 0.71	Chlorine is used as a drinking water disinfectant.
Chlorine as CL2	PPM	Yes	>/=0.2	1.08	2.01	.62 – 2.01	NA

Secondary Contaminants

Contaminant	Result	Unit	RUL	RUL Achieved	Potential Source
Aluminum	<0.01	PPM	0.20	Y	Treatment Process
Chloride	10.7	PPM	250	Y	Naturally Occurring
Hardness	8.28	PPM	250	Y	Naturally Occurring
Manganese	.132	PPM	.05	N	Naturally Occurring, Note: The recommended upper limit for manganese is based on staining of laundry. Manganese is an essential nutrient, and toxicity is not expected from levels which would be encountered in drinking water.
Sodium	9.17	PPM	50	Y	Naturally Occurring
Sulfate	3.3	PPM	250	Y	Naturally Occurring

Definitions

In the following table, you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms: we've provided the following definitions:

Term	Description
AL	<u>Action Level</u> : The concentration of contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
CU	<u>Color Unit</u>
CDC	<u>Center for Disease Control</u>
Disinfection By-product Precursors	A common source naturally occurring organic matter in surface water. Disinfection by-products are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (DPB precursors) present in surface water

Inorganic Contaminants	Contaminants such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming. These contaminants may be present in source water.
LRAA	<u>Locational Annual Running Average</u> Annual Running average for analysis from a specific sampling site.
MCL	<u>Maximum Contaminant Level</u> is the highest level of contaminant that is allowed in the drinking water. MCLs are set as close to the MCLGs as is feasible using the best available treatment technology.
MCLG	<u>Maximum Contaminant Level Goal</u> is the level of a contaminant in drinking water below which there is no known expected risk to health MCLGs allow a margin of safety.
MF/L	<u>Million fibers per liter</u>
MRDL	<u>Maximum Residual Disinfectant Level</u> is the highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG	<u>Maximum Residual Disinfectant Level Goal</u> the level of disinfectant allowed in drinking water below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
NA	Not Applicable
ND	<u>Not Detected</u> is a term used when a laboratory analysis demonstrates that the constituent is not present.
NTU	<u>Nephelometric Turbidity Unit</u> is the measure of the clarity of water. Turbidity is excess of 5 NTU is just noticeable to the average person.
Nutrients	Compounds, minerals and elements that aid growth that are both naturally occurring and manmade. Examples include nitrogen and phosphorus.
Organic Contaminants/ Volatile Organic Compounds	Compounds, including synthetic and volatile organic chemicals which are by-products of industrial processes and petroleum production, and can also come from gas stations, stormwater runoff and septic systems. Manmade chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE) and vinyl chloride. These compounds may be present in surface water.
Pesticides, Herbicides, Insecticides, Fungicides and Rodenticides	Manmade chemicals used to control pests, weeds and fungus which may come from a variety of sources such as agriculture, stormwater runoff and residential uses and may be present in source water. Common sources include land application and manufacturing centers of pesticides. Examples include herbicides such as atrazine and insecticides such as chlordane.
pC/L	<u>Picocuries per liter</u> is a measure of radioactivity in water.
PPB	<u>Parts per billion</u> or micrograms per liter equals one part per billion and corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
POE	<u>Point of Entry</u> to the water distribution system
PPM	<u>Parts per Million</u> or milligrams per liter (mg/l) equals one part per million and corresponds to one minute in two years or a single penny in \$10,000.
RAA	<u>Running Annual Average</u>
RUL	<u>Recommended Upper Limit</u> : the highest level of a constituent of drinking water that is recommended in order to protect aesthetic quality.
TON	<u>Threshold Odor Number</u>
TT	<u>Treatment Technique</u> is a required process intended to reduce the level of contaminant in drinking water.

PUBLIC NOTICE

The Borough of Sussex is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During 2017-2018, we did not complete all monitoring or testing for chlorine dioxide and chlorite during the period, May 2017 thru June 2018 and therefore cannot be sure of the quality at that time.

DISCUSSION OF VIOLATIONS

Please find below a list of Violations that the Borough is required to report to its water customers.

Treatment Technique violations occurred in January 2018 for both Combined Filter Effluent exceeding 1 NTU and >5% samples in the month being >0.3 NTU.

The list also includes Monitoring and Reporting Violations that were incurred during 2018 or violations dating back to 2015 that were not previously reported to you. These violations were recognized by the Borough with the assistance of the USEPA during the past year.

Please review the Violations List. You will note that each violation, while significant, details a Monitoring and Reporting Violation or Treatment Technique Issues.

DURING 2018 NO MCL (Maximum Contaminant Level) FOR ANY CONTAMINANT WAS EXCEEDED. Please review the tables above that report the actual values for each contaminant tested.

Sussex Water Department, List of 2018 Violations

- **Treatment Technique violations occurred in January 2018 for both Combined Filter Effluent (CFE) exceeding 1 NTU and >5% samples in the month exceeding 0.3 NTU.**
 - **Length of Exceedance:** Turbidities in excess of 1.0 NTU were recorded on January 12, 13, 14 & 15, 2018 with the system returning to compliance on January 16, 2018. The 11.3% of the January 2018 CFE turbidity readings exceeded 0.3 NTU in January 2018. The system returned to compliance with the monthly limit in February 2018.
 - **Health Effects:** Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
 - **Remedial Action:** Sussex Borough implemented a revised operations program on July 1, 2018 that requires 365 day per year attendance by a NJDEP Licensed Operator to manage and oversee operation of the treatment plant. Additionally, the WTP Logic Control System has been modified to incorporate automatic shutdown of the treatment plant in the event of a turbidity spike. Further, the operations contractor is authorized to attend the facility on a 24 hour per day basis, as required, to maintain compliance with all water quality regulations to the greatest extent possible.

- **Failure to report the Treatment Technique violations for turbidity in January 2018.**

- **Remedial Action:** Sussex Borough implemented a revised operations program on July 1, 2018 that requires 365 day per year attendance by a NJDEP Licensed Operator to manage and oversee operation of the treatment plant. The operational plan requires the NJDEP and Public Notifications be completed in conformance with the regulations.
- **Late Submission of Water Quality Parameter Data, 1/1/18-1/14/18:** Sussex Borough was required to monitor for pH and orthophosphate biweekly at the point of entry to the distribution system. Gaps occurred in the sampling schedule as a result of missed sampling events. This issue was resolved with the NJDEP and the required sampling was completed in October of 2018.
- **The Borough failed to submit the 2017 CCR Certification form to the NJDEP.** Sussex Borough was required to submit the 2017 CCR Certification Form to the NJDEP. While the CCR was distributed to the water system users as required the Certification form was not submitted to the NJDEP. The Borough has made provision to complete and transmit the 2018 Certification form and all future forms to the NJDEP on a timely basis.
- **The Borough failed to submit a copy of the 2017 CCR to the NJDEP.** Sussex Borough was required to submit a copy of the 2017 CCR to the NJDEP. While the CCR was distributed to the water system users as required a copy was not submitted to the NJDEP. The Borough has made provision to complete and transmit the 2018 CCR and all future CCR's to the NJDEP on a timely basis.
- **The Borough failed to transmit notices to the consumers for the results of the 2017, second semi-annual lead and copper sampling event.** Sussex Borough was required to submit a copy of the analytical results to the homeowners by April 1, 2018. The Borough has made provision to complete and transmit all lead and copper results to the respective homeowners on a timely basis.
- **Late Submission of Stage 2 Disinfection By-Product Data, 2nd Qtr. 2018:** Sussex Borough was required to submit monitoring data for Total Haloacetic Acids (HAA5). Data is submitted directly to the NJDEP by the analytical laboratory. The laboratory was late entering the data onto the system. The issue has been resolved and all data is currently being entered on timely basis.
- **Failure to develop and implement a Stage 1 Disinfectants/Disinfection Byproducts (Stage 1) monitoring plan that incorporates monitoring requirements for chlorine dioxide and chlorite.**
 - **Remedial Actions:** A revised plan submitted to the NJDEP for approval on 3/28/2019.
 - **Health Effects:** Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia. Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
- **Failure to monitor for chlorite at the entry point to the distribution system on a daily basis –** Daily monitoring began on July 5th, 2018, The Chlorine Dioxide system was not working correctly July 1-4th. Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in

fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.

- **Failure to monitor for chlorine dioxide at the entry point to the distribution system on a daily basis-** Daily monitoring began on July 5th, 2018, The Chlorine Dioxide system was not working correctly between July 1, 2018 and July 4, 2018. Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
- **Failure to collect a chlorite three-sample set each month in the distribution system for the months of May to December 2017** – Issued resolved on July 1, 2018, each three-sample set has been collected each month subsequent to July 1, 2018. Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
- **Failure to report to the State the results of the chlorite and chlorine dioxide at the entrance to the distribution system and within the distribution system** – Issue resolved on July 1, 2018; each result has been reported to the State each month subsequent to July 1, 2018. Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia. Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
- **Failure to report to the State the results of chlorine dioxide dosage being applied to the treatment process, for at least the month of May to December 2017** – Issued resolved on July 1, 2018, each result has been reported to the State each month subsequent to July 1, 2018. Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
- **Failure to update O & M procedures, to incorporate, at least, standard operating procedures, monitoring plans, and emergency response operations reflecting the application of chlorine dioxide as part of the drinking water treatment process.** Update completed and submitted for review on 3/28/2019. Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
- **Failure to identify in the RTCR sample siting plan, sampling sites that are representative of water throughout the distribution system.** A revision to the previously approved plan was submitted to the NJDEP on March 28, 2019. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
- **Failure to conduct RTCR monitoring in accordance with the sample siting plan.** Issue resolved on July 1, 2018; all subsequent samples have been collected in accordance with the sample siting plan. Coliforms are bacteria that are naturally present in the environment and

are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

- **Failed to identify in the RTCR sample siting plan, repeat monitoring locations that are within five service connections upstream and downstream of the routine monitoring sites.** A revision to the previously approved plan incorporating the repeat monitoring locations was submitted to the NJDEP on March 28, 2019. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
- **Failed to report to the State the results of RTCR samples that were collected at locations identified as routine sampling sites.** Issue resolved on July 1, 2018; all results collected as part of the RTCR program are reported to the NJDEP as required. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
- **Failed to have available a Stage 2 monitoring plan (for TTHM and HAA5).** The plan has been located and is now filed onsite. Some people who drink water containing trihalomethanes (TTHM) in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer. Some people who drink water containing haloacetic acids (HAA5) in excess of the MCL over many years may have an increased risk of getting cancer.
- **Failed to verify the accuracy of continuous monitoring equipment for combined and individual filter effluent turbidity on a daily basis.** Issue resolved on July 1, 2018; the accuracy of each device is verified daily. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
- **Failed to verify the accuracy of the performance of the disinfectant residual analyzer/recorder on a daily basis.** Issue resolved on July 1, 2018; the accuracy of each device is verified daily.
- **Failed to provide evidence that the combined filter effluent turbidity was continuously monitored and recorded on the following dated: January 31, 2016, February 1, 2016, February 14-15, 2016, May 26-27, 2016, October 24-25, 2016, February 10-12, 2017, May 17-18, 2017, October 1, 2017, November 28-29, 2017, and December 1-2, 2017.** Note: The plant data acquisition system failed to log the data on the referenced dates. The Borough has installed a new data acquisition workstation and redundant backups for the automatically logged data. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
- **Failed to provide evidence that the residual disinfectant concentration of the water entering the distribution system was continuously monitored and recorded on the following dated: January 31, 2016, February 1, 2016, February 14-15, 2016, May 26-27, 2016, October 24-25, 2016, February 10-12, 2017, May 17-18, 2017, October 1, 2017, November 28-29, 2017, and December 1-2, 2017.** Note: The plant data acquisition system failed to log the data on the referenced dates. The Borough has installed a new data acquisition workstation and redundant backups for the automatically logged data.

- **Failed to provide evidence that the individual filter effluent turbidity was continuously monitored and recorded on the following dated: January 31, 2016, February 1, 2016, February 14-15, 2016, May 26-27, 2016, October 24-25, 2016, February 10-12, 2017, May 17-18, 2017, October 1, 2017, November 28-29, 2017, and December 1-2, 2017.** The plant SCADA system failed to log the data on the referenced dates. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
- **Failed to report to the State, during the month of June 2017, the number and percentage of combined filter effluent turbidity measurements.** Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
- **Failure to report to the State, for the month of June 2017: Individual filter effluent turbidities over 1.0 NTU in two consecutive readings apart, the filter number, date of event, and the cause (if known).** Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
- **Failure to include turbidity data, such as the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits, in the CCR distributed in 2016, 2017, and 2018 -** This CCR 2019 (2018 data) has been revised to include the required information on turbidity. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
- **Failure to follow Lead and Copper tiering criteria-** Issue resolved, submitted new plan to EPA and NJDEP, waiting on approval of the Department. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
- **Failed to include required information on lead and copper, including dates and results of the most recent sampling in the CCR's distributed in 2016 (2015 data), 2017 (2016 data), and 2018 (2017 data).** This CCR 2019 (2018 data) has been revised to include the required information on lead and copper. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many

years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

- **Failed to include the required informational statement about lead in drinking water and its effects on children in CCRs in 2016, 2017, and 2018.** This CCR 2019 (2018 data) has been revised to include the required informational statement on the effects of lead on children. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
- **Failed to retain copies of 2015 Lead and Copper customer chain of custody in the plant file.**
- **Failed to include the range of individual sample results for TTHM and HAAs in the CCRs for 2016 and 2017.** This CCR 2019 (2018 data) has been revised to include the required data. Some people who drink water containing trihalomethanes (TTHM) in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer. Some people who drink water containing haloacetic acids (HAA5) in excess of the MCL over many years may have an increased risk of getting cancer.
- **Failed to include the highest monthly number of total coliform positive samples in CCRs distributed in 2016 and 2017.** This CCR 2019 (2018 data) has been revised to include the required data. Samples collected in 2016 and 2017 did not have any total coliform positive results. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
- **Failed to submit an LCR sampling pool sufficiently large to ensure that Respondent can collect the number of lead and copper tap samples.** The lead and copper sampling plan has been revised to address this issue based upon a new materials evaluation of the water distribution system. The plan is in review by the NJDEP.
- **Failed to provide a response to a Request for Information issued September 12, 2018.** Response submitted on February 26, 2019.
- **Failed to correct a significant deficiency or submit an action plan for its correction.** All deficiencies corrected or action plans submitted on or before March 28, 2019.
- **Failed to submit updated O & M procedures related to the application of chlorine dioxide as part of the drinking water treatment process.** Updated O&M procedures submitted to the NJDEP and USEPA for review on March 28, 2019 and May 30, 2019.
- **Failed to conduct disinfection profile/benchmark prior to the application of chlorine dioxide.**
- **Late submission on Chlorine results for July 2018-** The monthly average distribution chlorine residual was not entered onto the Form BSDW-25 on the original submission dated. The value was subsequently entered onto the form and the report resubmitted on August 28, 2018.
- **Late Submission of Water Quality Data:** The system was required to submit monitor data for pH, orthophosphate for the period 7/1/18 thru 12/31/2018, at the point of entry using the E2 system. The contract lab was late entering the data onto the system. The issue has been resolved and all data is being inputted by the lab on timely basis.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Susceptibility Ratings for Sussex Water Department Sources

The table below illustrates the susceptibility ratings for the seven contaminant categories (and radon) for each source in the system. The table provides the number of wells and intakes that rated high (H), medium (M), or low (L) for each contaminant category. For susceptibility ratings of purchased water, refer to the specific water system's source water assessment report. The seven contaminant categories are defined at the bottom of this page. DEP considered all surface water highly susceptible to pathogens, therefore all intakes received a high rating for the pathogen category. For the purpose of Source Water Assessment Program, radionuclides are more of a concern for ground water than surface water. As a result, surface water intakes' susceptibility to radionuclides was not determined and they all received a low rating.

If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels. As a result of the assessments, DEP may customize (change existing) monitoring schedules based on the susceptibility ratings.

The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for this public water system, which is available at <http://www.nj.gov/dep/watersupply/swap/index.html>, or by contacting the NJDEP, Bureau of Safe Drinking Water at 609-292-5550 or watersupply@dep.nj.gov.

Intake Susceptibility Ratings

Intakes	Pathogens	Nutrients	Pesticides	Volatile Organic Compounds	Inorganic Contaminants	Radio-nuclides	Radon	Disinfection Byproduct Precursors
1 Surface Water	1-High	1-Low	1 - Low	1 - Low	1 - High	1 - Low	1 - Low	1-High

