Definitions You Need To Know

Action Level - the concentration of a contaminant that, if exceeded, triggers treatment or other requirements a water system must follow.

Coliform Absent (ca) - Laboratory analysis indicates that the contaminant is not present.

Disinfection byproducts (DBPs) – are formed when disinfectants used in water treatment plants react with bromide and/or natural organic matter (i.e., decaying vegetation) present in the source water. Different disinfectants produce different types or amounts of disinfection byproducts. Disinfection byproducts for which regulations have been established include trihalomethanes (TTHM), haloacetic acids (HAA5), bromate, and chlorite.

Initial Distribution System Evaluation (IDSE) - a one-time study conducted by water systems to identify distribution system locations with high concentrations of trihalomethanes (THMs) and haloacetic acids (HAAs). Water systems will use results from the IDSE, in conjunction with their Stage 1 DBPR compliance monitoring data, to select compliance monitoring locations for the Stage 2 DBPR.

Locational Running Annual Average (LRAA) - yearly average of all the DPB results at each specific sampling site in the distribution system. The highest distribution site LRAA is reported in the Table of Detected Contaminants.

Maximum Contaminant Level (MCL) – The "Maximum Allowed" is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) – The "Goal" is the level of contaminant in drinking water below which there is no known or excepted risk of health. MCLGs allow for margin of safety.

Maximum Residual Disinfection Level (MRDL) - the highest level of a disinfectant allowed in drinking water.

Millirems per year (mrem/yr) – Million fibers per liter is a measure of presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) – Nephelometric turbidity unit is a measure of the clarity of the water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Non-Detects (ND) – Laboratory analysis indicates that the constituent is not present above detection limits of lab equipment.

Not Reported (NR) - laboratory analysis, usually Secondary Contaminants, not reported by water system. EPA recommends secondary standards to water systems but does not require systems to comply.

Parts per billion (ppb) or Micrograms per liter – One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Parts per million (ppm) or Milligrams per liter (mg/l) – One part per million corresponds to one minute in two years or a single penny in $10,000.

Parts per quadrillion (ppq) or Picograms per liter – One part per quadrillion corresponds to one minute in 2,000,000,000 years, or a single penny in $10,000,000,000,000.

Parts per trillion (ppt) or Nanograms per liter – One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.

Picocuries per liter (pCi/l) – Picocuries per liter is a measure of the radioactivity in water.

RAA - Running annual average

Standard Units (S.U.) - pH of water measures the water's balances of acids and bases and is affected by temperature and carbon dioxide gas. Water with less than 6.5 could be acidic, soft, and corrosive. A pH greater than 8.5 could indicate that the water is hard.

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

Variances & Exemptions (V&E) – State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

OUR DAILY WATER

Oxford Water Works & Sewer Board

2023 Annual Water Quality Report

(Testing Performed January - December 2022)

OUR DAILY WATER

If you have any questions about this report or concerning your water, please contact our office. We want our valued customers to be informed about their water utility.

Oxford Water Works & Sewer Board
600 Barry Street, Post Office Box 3663
Oxford, Alabama 36203
Phone: 256-831-5618 Fax: 256-831-9063

Main Office Hours: 7:00 a.m. to 4:30 p.m. Monday—Friday
Water Board Meets 3rd Wednesday of each month at 12:00 p.m.

General Manager ..... ***Wayne Livingston***
Controller ..... ***Patrick Prater***
Engineer ..... ***Meredith Holzer***
Office Manager ..... ***Amanda Moore***

BANK DRAFT IS AVAILABLE FROM OXFORD WATER

Saves you: Time – Postage – Checks. Contact our office for more information.

Quality On Tap!

TABLE OF DETECTED DRINKING WATER CONTAMINANTS

Contaminants	Violation (Yes/No)	Level Detected	Unit of Measurement	MCLG	MCL	Likely Source of Contamination
Chlorine	No	0.99 - 2.07	ppm	MRDLG=4	MRDL=4	Water additive used to control microbes
Total Organic Carbon	No	0.60 - 1.40	ppm	N/A	TT	Soil runoff
Turbidity	No	Highest 0.032 100% <0.5	NTU	N/A	TT	Soil runoff
Barium	No	0.02 - 0.04	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper (customer tap)	No	0.094* (0 > AL)	ppm	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Nitrate (as Nitrogen)	No	0.30 - 1.10	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Trichloroethylene	No	Avg 1.20 Range ND-2.80	ppb	0	5	Discharge from metal degreasing sites and other industries
TTHM (Total Trihalomethanes	No	Range ND - 24.0	ppb	0	80	By-product of drinking water chlorination
HAA5 (Haloacetic Acids)	No	Range ND - 16.0	ppb	0	60	By-product of drinking water chlorination
Unregulated Contaminants						
Chloroform	No	ND - 5.30	ppb	N/A	N/A	Naturally occurring in the environment or from runoff
Bromodichloromethane	No	ND - 3.30	ppb	N/A	N/A	Naturally occurring in the environment or from runoff
Chlorodibromomethane	No	ND - 11.20	ppb	N/A	N/A	Naturally occurring in the environment or from runoff
Secondary Contaminants						
Chloride	No	2.5 - 7.7	ppm	N/A	250	Naturally occurring or from discharge or runoff
Hardness	No	113 - 164	ppm	N/A	N/A	Naturally occurring or from water additives
pH	No	7.40 - 8.1	S.U.	N/A	N/A	Naturally occurring or from water additives
Sodium	No	ND - 5.7	ppm	N/A	N/A	Naturally occurring in the environment
Sulfate	No	1.7 - 6.1	ppm	N/A	250	Naturally occurring or from discharge or runoff
Total Dissolved Solids	No	109 - 164	ppm	N/A	500	Naturally occurring or from discharge or runoff

* Figure shown is 90th percentile and # of sites above action level (1.3 ppm) = 0

2023 Annual Water Quality Report

Testing Performed January through December 2022

Oxford Water Works & Sewer Board

Oxford Water Works & Sewer Board is pleased to present to you this year's 2023 Annual Water Quality Report. This report is designed to inform you about the quality water and service we deliver to you on a daily basis, and our constant goal being to provide you with a safe and dependable supply of drinking water.

THE OXFORD WATER & SEWER SYSTEM INCLUDES:

Water Mains in Service.....318 miles
Sewer Mains in Service.....139 miles
Water Storage Tanks.....5
Water Treatment Plant.....1
Water Storage Capacity.....5.4 Million Gallons
Water Production Capacity.....12.0 Million Gallons Per Day
Booster Pumping Stations.....8
Public Fire Hydrants.....996
Sewer Treatment Capacity.....4.5 Million Gallons Per Day
Sewer Pumping Stations.....37
Metered Connections.....10,458

Oxford's Water Supply is classified as Groundwater. Groundwater classification means the water is pumped from below the surface of the ground. Drinking water is supplied to customers of Oxford Water by five production wells that draw water from The Knox Group, Shady Dolomite Aquifer. Each well is approximately 300 feet deep and the water from each well meets all regulations without any treatment required; however, some chlorine is added to protect the water in tanks and distribution lines. The Oxford Quarry also provides water to the Oxford system and is filtered using membranes at the Leon Smith Water Treatment Plant.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material, and it can pick up substances resulting from the presence of animals or from human activities.

The Oxford Water Works routinely monitors for constituents in your drinking water. We had tests performed for over 90 constituents and only 18 were at detectable levels. All monitoring and testing were performed according to Federal and State Laws. This table shows the results of our monitoring for the period of January 1, 2022 to December 31, 2022 for Inorganics, Lead and Copper, Microbiological Contaminants, Volatile Organic Contaminants, and Disinfection By-Products. All of these were performed in accordance with the regulatory monitoring schedule shown here.

Monitoring Schedule Per Constituent	Date
Inorganic Contaminants	2022
Lead/Copper	2022
Microbiological Contaminants	Current
Nitrates	2021
Radioactive Contaminants	2021
Synthetic Organic Contaminants (including pesticides &herbicides)	2021
Volatile Organic Contaminants	2022
Disinfection By-Products	2022
Unregulated Contaminants Monitoring Rule 4 (UCMR4) Contaminants	2020
PFAS Contaminants	2022

<u>As you can see by the table, our system had NO drinking water quality violations.</u> We were proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water **IS SAFE** at these levels. MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 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. Thank you for allowing us to continue providing your family with clean quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for your understanding. Please call our office if you have any questions.

The Safe Drinking Water Act (SDWA) was signed into law on December 16, 1974. The purpose of the law is to assure that the nation's water supply systems serving the public meet the minimum national standards for the protection of public health. The SDWA covers all public water systems with piped water for human consumption with at least 15 service connections or a system that regularly serves at least 25 individuals. The SDWA directed the U.S. Environmental Protection Agency (EPA) to establish national drinking water standards. These standards limit the amount of certain contaminants provided by public water. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water. All drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 800-426-4791. 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 infection. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

The most recent testing for lead and copper compliance within the distribution system was in 2022. This testing was done in accordance with applicable regulations. No lead or copper samples exceeded the action level. 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. The Oxford Water Works and Sewer Board is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several 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, testing methods and other steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at *http:www/epa.gov/safewater/lead.*

The Oxford Water Works & Sewer Board is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether your drinking water meets health standards. Oxford incurred a reporting noncompliance from a failure to submit the January to June 2022 PFAS monitoring results by the required date, July 10, 2022. The results were reported on July 19, 2022 due to a backup issue at the laboratory. Oxford also failed to collect the required routine samples for E.coli in April 2022 and May 2022 due to an incorrect sampling schedule. These procedures have been remedied in order to ensure that these violations are not repeated. Although these incidents were not an emergency, as our customers, you have the right to know what happened and what we did to correct the situation. **There is nothing you need to do. You do not need to boil your water or take other corrective actions. You may continue to drink the water.** Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (e.g., 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. **Oxford has monitored for all required contaminants properly since the non-compliances occurred.** Should you have any questions concerning this non-compliance or monitoring requirements, please contact Wayne Livingston by phone at (256) 831-5618 or by mail at PO Box 3663, Oxford, AL 36203.

PFAS are a group of manmade chemicals that have been in use since the 1940s. Because of their widespread use, most people have been exposed to PFAS and there is evidence that exposure to PFAS may lead to adverse health effects. Below is a list and results of PFAS contaminants Oxford monitored during 2022. For more information, visit *www.epa.gov/pfas*.

Contaminant	Unit Msmt	Level Detected	Contaminant	Unit Msmt	Level Detected
11Cl-PF3OUdS (11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid)	ppb	ND	Perfluoroheptanoic acid	ppb	ND
9Cl-PF3ONS (9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid)	ppb	ND	Perfluorohexanesulfonic acid	ppb	ND-0.0025
ADONA (4,8-dioxa-3H-perfluorononanoic acid)	ppb	ND	Perfluorononanoic acid	ppb	ND
HFPO-DA (Hexafluoropropylene oxide dimer acid)	ppb	ND	Perfluorooctanesulfonic acid	ppb	ND-0.0061
NEtFOSAA (N-ethylperfluorooctanesulfonamidoacetic acid)	ppb	ND	Perfluorooctanoic acid	ppb	ND
NMeFOSAA (N-methylperfluorooctanesulfonamidoacetic acid)	ppb	ND	Perfluorotetradecanoic acid	ppb	ND
Perfluorobutanesulfonic acid	ppb	ND	Perfluorotridecanoic acid	ppb	ND
Perfluorodecanoic acid	ppb	ND	Perfluoroundecanoic acid	ppb	ND
Perfluorohexanoic acid	ppb	ND	Total PFAS	ppb	ND-0.00860
Perfluorododecanoic acid	ppb	ND			

Oxford Water Works & Sewer Board is a member of American Water Works Association (AWWA), Alabama Rural Water Association (ARWA), the National Rural Water Association (NRWA), Alabama's Water Environment Association (AWEA), and the Groundwater Foundation.

Unregulated Contaminant Rule 4 (UCMR4) Contaminants					
Contaminant	Unit Msmt	Level Detected	Contaminant	Unit Msmt	Level Detected
Germanium	ppb	ND	1-butanol	ppb	ND
Manganese	ppb	ND-48.8	2-methoxyethanol	ppb	ND
Alpha-hexachlorocyclohexane	ppb	ND	2-propen-1-ol	ppb	ND
Chlorpyrifos	ppb	ND	Butylated hydroxyanisole	ppb	ND
Dimethipin	ppb	ND	O-toluidine	ppb	ND
Ethoprop	ppb	ND	Quinoline	ppb	ND
Oxyfluorfen	ppb	ND	Total organic carbon (TOC)	ppb	1090-1120
Profenofos	ppb	ND	Bromide	ppb	ND
Tebuconazole	ppb	ND	HAA9	ppb	ND-2.10
Total permethrin (cis- & trans-)	ppb	ND	HAA6Br	ppb	ND
Tribufos	ppb	ND	HAA5	ppb	ND

STANDARD LIST OF PRIMARY DRINKING WATER CONTAMINANTS					
Contaminant	MCL	Unit	Contaminant	MCL	Unit
Bacteriological Contaminants			trans-1,2-Dichloroethylene	100	ppb
Total Coliform Bacteria	<5%	present/absent	Dichloromethane	5	ppb
Fecal Coliform and E. coli	0	present/absent	1,2-Dichloropropane	5	ppb
Fecal Indicators	0	present/absent	Di (2-ethylhexyl)adipate	400	ppb
Turbidity	TT	NTU	Di (2-ethylhexyl)phthalate	6	ppb
Cryptosporidium	TT	Calc.organisms/l	Dinoseb	7	ppb
Radiological Contaminants			Dioxin [2,3,7,8-TCDD]	30	ppq
Beta/photon emitters	4	mrem/yr	Diquat	20	ppb
Alpha emitters	15	pCi/l	Endothall	100	ppb
Combined radium	5	pCi/l	Endrin	2	ppb
Uranium	30	pCi/l	Epichlorohydrin	TT	TT
Inorganic Chemicals			Ethylbenzene	700	ppb
Antimony	6	ppb	Ethylene dibromide	50	ppt
Arsenic	10	ppb	Glyphosate	700	ppb
Asbestos	7	MFL	Heptachlor	400	ppt
Barium	2	ppm	Heptachlor epoxide	200	ppt
Beryllium	4	ppb	Hexachlorobenzene	1	ppb
Cadmium	5	ppb	Hexachlorocyclopentadiene	50	ppb
Chromium	100	ppb	Lindane	200	ppt
Copper	AL=1.3	ppm	Methoxychlor	40	ppb
Cyanide	200	ppb	Oxamyl [Vydate]	200	ppb
Fluoride	4	ppm	Polychlorinated biphenyls	0.5	ppb
Lead	AL=15	ppb	Pentachlorophenol	1	ppb
Mercury	2	ppb	Picloram	500	ppb
Nitrate	10	ppm	Simazine	4	ppb
Nitrite	1	ppm	Styrene	100	ppb
Selenium	0.05	ppm	Tetrachloroethylene	5	ppb
Thallium	0.002	ppm	Toluene	1	ppm
Organic Contaminants			Toxaphene	3	ppb
2,4-D	70	ppb	2,4,5-TP(Silvex)	50	ppb
Acrylamide	TT	TT	1,2,4-Trichlorobenzene	0.07	ppm
Alachlor	2	ppb	1,1,1-Trichloroethane	200	ppb
Benzene	5	ppb	1,1,2-Trichloroethane	5	ppb
Benzo(a)pyrene [PAHs]	200	ppt	Trichloroethylene	5	ppb
Carbofuran	40	ppb	Vinyl Chloride	2	ppb
Carbon tetrachloride	5	ppb	Xylenes	10	ppm
Chlordane	2	ppb	**Disinfectants & Disinfection Byproducts**		
Chlorobenzene	100	ppb	Chlorine	4	ppm
Dalapon	200	ppb	Chlorine Dioxide	800	ppb
Dibromochloropropane	200	ppt	Chloramines	4	ppm
o-Dichlorobenzene	600	ppb	Bromate	10	ppb
p-Dichlorobenzene	75	ppb	Chlorite	1	ppm
1,2-Dichloroethane	5	ppb	HAA5 [Total haloacetic acids]	60	ppb
1,1-Dichloroethylene	7	ppb	TTHM [Total trihalomethanes]	80	ppb
cis-1,2-Dichloroethylene	70	ppb			

UNREGULATED CONTAMINANTS			
1,1 – Dichloropropene	Aldicarb	Chloroform	Metolachlor
1,1,1,2-Tetrachloroethane	Aldicarb Sulfone	Chloromethane	Metribuzin
1,1,2,2-Tetrachloroethane	Aldicarb Sulfoxide	Dibromochloromethane	N - Butylbenzene
1,1-Dichloroethane	Aldrin	Dibromomethane	Naphthalene
1,2,3 - Trichlorobenzene	Bromobenzene	Dicamba	N-Propylbenzene
1,2,3 - Trichloropropane	Bromochloromethane	Dichlorodifluoromethane	O-Chlorotoluene
1,2,4 - Trimethylbenzene	Bromodichloromethane	Dieldrin	P-Chlorotoluene
1,3 – Dichloropropane	Bromoform	Hexachlorobutadiene	P-Isopropyltoluene
1,3 – Dichloropropene	Bromomethane	Isoprpylbenzene	Propachlor
1,3,5 - Trimethylbenzene	Butachlor	M-Dichlorobenzene	Sec - Butylbenzene
2,2 – Dichloropropane	Carbaryl	Methomyl	Tert - Butylbenzene
3-Hydroxycarbofuran	Chloroethane	MTBE	Trichlorfluoromethane