

**CITY OF LANCASTER
BUREAU OF WATER
CHEMISTRY & MICROBIOLOGY LABORATORIES**



2018 DRINKING WATER ANALYSIS REPORT

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PA DEPARTMENT OF ENVIRONMENTAL PROTECTION - PRIMARY CONTAMINANT LIST

INORGANIC

<u>ANALYSIS</u>	<u>CONESTOGA PLANT</u>		<u>SUSQUEHANNA PLANT</u>		<u>PA DEP MCL</u>	
ANTIMONY	ND	mg/L	ND	mg/L	0.006	mg/L
ARSENIC	ND	"	ND	"	0.01	"
BARIUM	0.05	mg/L	0.023	mg/L	2	mg/L
BROMIDE *	ND	"	ND	"	NS	- - -
BERYLLIUM	ND	"	ND	"	0.004	mg/L
CADMIUM	ND	"	ND	"	0.005	"
CHROMIUM	ND	"	ND	"	0.1	"
COPPER	ND	"	ND	"	1.3	"
CYANIDE, Free	ND	"	ND	"	0.2	"
FLUORIDE	0.63	"	0.50	"	2.0	"
LEAD **	0.006	"	0.006	"	0.015	"
MERCURY	ND	"	ND	"	0.002	"
NICKEL	ND	"	ND	"	0.1	"
NITRATE	5.2	"	<2.0	"	10	"
SELENIUM	ND	"	ND	"	0.05	"
THALLIUM	ND	"	ND	"	0.002	"

* Testing for presence of Marcellus shale "frack" water in Susquehanna Treatment Plant raw water.

** Lead Levels from High Risk Homes in the Distribution System: 90th Percentile = 0.006 mg/L. Tested in 2016.

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CHLORINE

<u>ANALYSIS</u>	<u>CONESTOGA PLANT</u>		<u>OYSTER POINT RESERVOIR</u>		<u>DEP MCL</u>	
CHLORINE, Free Residual	1.3	mg/L	1.1	mg/L	4.0	mg/L

TURBIDITY

<u>ANALYSIS</u>	<u>CONESTOGA PLANT</u>		<u>SUSQUEHANNA PLANT</u>		<u>PA DEP MCL</u>	
TURBIDITY, Combined Effluent	0.01	NTU	0.02	NTU	0.3	NTU

MICROBIOLOGICAL

	<u>RESULT</u>	<u>DEP TT</u>
TOTAL COLIFORM*	0.00%	<5% POSITIVES/MONTH

	<u>RESULT</u>	<u>PA DEP MCL</u>
ESCHERICHIA COLI*	0	0 POSITIVES/MONTH

TRIHALOMETHANES

	<u>RESULT</u>	<u>PA DEP MCL</u>
TRIHALOMETHANES, TOTAL * (Highest 12 Month Locational Running Annual Average)	58 $\mu\text{g/L}$	80 $\mu\text{g/L}$

HALOACETIC ACIDS

	<u>RESULT</u>	<u>PA DEP MCL</u>
HALOACETIC ACIDS, TOTAL * (Highest 12 Month Locational Running Annual Average)	42 $\mu\text{g/L}$	60 $\mu\text{g/L}$

* Results are from samples taken in the distribution system

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PA DEPARTMENT OF ENVIRONMENTAL PROTECTION - SECONDARY CONTAMINANT LIST

SECONDARY

<u>ANALYSIS</u>	<u>CONESTOGA PLANT</u>		<u>SUSQUEHANNA PLANT</u>		<u>PA DEP SMCL</u>	
ALUMINUM, Total	0.04	mg/L	0.03	mg/L	0.05	mg/L
CHLORIDE	34.3	"	20.6	"	250	"
COLOR	0.06	CU	0.4	CU	15	CU
IRON, Total	0.01	mg/L	0.01	mg/L	0.3	mg/L
MANGANESE, Total	0.024	"	0.020	"	0.05	"
pH	7.5	SU	7.5	SU	6.5-8.5	SU
SULFATE	39	mg/L	34	mg/L	250	mg/L

OTHER TESTS

	<u>CONESTOGA PLANT</u>		<u>SUSQUEHANNA PLANT</u>		<u>PA DEP Range</u>	
ALKALINITY	144	mg/L	56	mg/L	NS	mg/L
HARDNESS, milligrams/liter	204	"	85	"	NS	"
HARDNESS, grains/gallon	12	GPG	5	GPG	NS	GPG
ORGANIC CARBON, Total	2.0	mg/L	1.8	mg/L	NS	mg/L
PHOSPHATE, Ortho	0.24	mg/L	0.22	mg/L	0.13-0.33	"
SPECIFIC CONDUCTANCE	559	µS/cm	284	µS/cm	NS	µS/cm

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PA DEPARTMENT OF ENVIRONMENTAL PROTECTION - VOLATILE ORGANIC CHEMICAL LIST

VOLATILE ORGANIC CHEMICALS

<u>ANALYSIS</u>	<u>CONESTOGA PLANT</u>		<u>SUSQUEHANNA PLANT</u>		<u>PA DEP MCL</u>	
	ND	mg/L	ND	mg/L	0.005	mg/L
BENZENE	ND	mg/L	ND	mg/L	0.005	mg/L
CARBON TETRACHLORIDE	ND	"	ND	"	0.005	"
CHLOROBENZENE	ND	"	ND	"	0.1	"
1,2-DICHLOROBENZENE	ND	"	ND	"	0.6	"
1,4 - DICHLOROBENZENE	ND	"	ND	"	0.075	"
1,2-DICHLOROETHANE	ND	"	ND	"	0.005	"
1,1-DICHLOROETHENE	ND	"	ND	"	0.007	"
cis-1,2,-DICHLOROETHYLENE	ND	"	ND	"	0.07	"
trans-1,2,-DICHLOROETHENE	ND	"	ND	"	0.1	"
1,2-DICHLOROPROPANE	ND	"	ND	"	0.005	"
ETHYLBENZENE	ND	"	ND	"	0.7	"
METHYLENE CHLORIDE	ND	"	ND	"	0.005	"
STYRENE	ND	"	ND	"	0.1	"
TETRACHLOROETHENE	ND	"	ND	"	0.005	"
TOLUENE	ND	"	ND	"	1	"
1,2,4-TRICHLOROBENZENE	ND	"	ND	"	0.07	"
1,1,1-TRICHLOROETHANE	ND	"	ND	"	0.2	"
1,1,2-TRICHLOROETHANE	ND	"	ND	"	0.005	"
TRICHLOROETHENE	ND	"	ND	"	0.005	"
VINYL CHLORIDE	ND	"	ND	"	0.002	"
XYLENES (total)	ND	"	ND	"	10	"

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PA DEPARTMENT OF ENVIRONMENTAL PROTECTION - SYNTHETIC ORGANIC CHEMICAL LIST

SYNTHETIC ORGANIC CHEMICALS

<u>ANALYSIS</u>	<u>CONESTOGA PLANT</u>		<u>SUSQUEHANNA PLANT</u>		<u>DEP MCL</u>	
ALACHLOR	ND	mg/L	ND	mg/L	0.002	mg/L
ALDICARB	ND	"	ND	"	0.003	"
ALDICARB SULFOXIDE	ND	"	ND	"	0.004	"
ALDICARB SULFONE	ND	"	ND	"	0.002	"
ATRAZINE	ND	"	ND	"	0.003	"
BENZO(a)PYRENE	ND	"	ND	"	0.0002	"
CARBARYL	ND	"	ND	"	NS	"
CARBOFURAN	ND	"	ND	"	0.04	"
CHLORDANE	ND	"	ND	"	0.002	"
DALAPON	ND	"	ND	"	0.2	"
DIBROMOCHLOROPROPANE	ND	"	ND	"	0.0002	"
BIS(2-ETHYLHEXYL)ADIPHATE	ND	"	ND	"	0.4	"
BIS(2-ETHYLHEXYL)PHTHALATE	ND	"	ND	"	0.006	"
DICAMBA	ND	"	ND	"	0.2	"
DINOSEB	ND	"	ND	"	0.007	"
DIQUAT	ND	"	ND	"	0.02	"
ENDOTHALL	ND	"	ND	"	0.1	"
ENDRIN	ND	"	ND	"	0.0002	"
ETHYLENE DIBROMIDE (EDB)	ND	"	ND	"	0.00005	"
GLYCOPHOSPHATE	ND	"	ND	"	0.7	"
HEPTACHLOR	ND	"	ND	"	0.0004	"
HEPTACHLOR EPOXIDE	ND	"	ND	"	0.0002	"
HEXACHLOROCYCLOPENTADIENE	ND	"	ND	"	0.05	"
3-HYDROXYCARBOFURAN	ND	"	ND	"	NS	"
LINDANE	ND	"	ND	"	0.0002	"
METHOMYL	ND	"	ND	"	NS	"
METHOXYCHLOR	ND	"	ND	"	0.04	"
METOLACHLOR	ND	"	ND	"	0.2	"
METRIBUXIN	ND	"	ND	"	0.2	"
OXAMYL (Vydate)	ND	"	ND	"	0.2	"
PENTACHLOROPHENOL	ND	"	ND	"	0.001	"
PICLORAM	ND	"	ND	"	0.5	"
PROPACHLOR	ND	"	ND	"	NS	"
SIMAZINE	ND	"	ND	"	0.004	"
2,4-D	ND	"	ND	"	0.07	"
2,4,5-TP (SILVEX)	ND	"	ND	"	0.05	"
2,3,7,8-TCDD (DIOXIN)	ND	"	ND	"	0.0000003	"

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ABBREVIATIONS

°C - DEGREES CENTIGRADE	ND - NOT DETECTED
cm - CENTIMETER	NS - NO STANDARD
CU - COLOR UNIT	NT - NO TEST
HPC - HETEROTROPHIC PLATE COUNT	NTU - NEPHELOMETRIC TURBIDITY UNIT
Mg/L - MILLIGRAMS/LITER	TT - TREATMENT TECHNIQUE REQUIREMENT
mL - MILLILITER	WL - WORKING LEVEL
pCi/L - PICOCURIES/LITER	< - LESS THAN
MF/L - MILLION FIBERS PER LITER, LESS THAN 10 MICROMETERS LONG (ASBESTOS)	
µS/cm - MICRO SEIMENS PER CENTIMETER	
PA DEP - PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION	
MCL - MAXIMUM CONTAMINANT LEVEL	
SMCL - SECONDARY MAXIMUM CONTAMINANT LEVEL, Not Legally Enforceable	