What's in My Water?
Emerging Contaminants in New York's Drinking Water Systems

As part of the Safe Drinking Water Act, Congress enacted a federal law that requires EPA to establish a list of unregulated contaminates that are not part of current regulatory testing every five years. In response, EPA published a monitoring rule entitled Unregulated Contaminant Monitoring Rule (UCMR) which requires Public Water Utilities serving more than 10,000 people to perform testing. The UCMR testing assists the EPA in determining the occurrence of suspected contaminants in drinking water and whether regulation is required. The contaminants in UCMR testing are not regulated by the EPA or state and therefore do not currently have set drinking water standards. It is important to note that the presence of contaminants does not necessarily indicate there is a public health risk.

In May of 2019, the New York Public Interest Research Group (NYPIRG) published a report titled "What's in My Water?: Emerging Contaminants in New York's Drinking Water Systems". This report summarized the results of testing performed between 2013 and 2015 by NYS Public Water Utilities serving more than 10,000 people to comply with the EPA's Unregulated Contaminant Monitoring Rule (UCMR).

In 2014 and 2015 the City and Town of Poughkeepsie participated in the third round of UCMR testing (UCMR-3). The UCMR-3 contaminant list contained 7 volatile organic compounds, 1 synthetic organic compound, 6 metals, 1 oxyhalide anion, and 6 perfluorinated compounds (see table 1 for complete list of analytes). Of the 21 analytes tested, five were detected in the City's samples and six were detected in the Town's samples. The contaminants detected in the City and Town samples are listed in Table 2 and 3 respectively. With the exception of multiple chlorate results in the Town, the compounds detected are below any current recommended limit. Chlorate is a byproduct of the sodium hypochlorite used for disinfection of the drinking water produced by the Poughkeepsies' Water Treatment Facility. In 2016 our treatment facility incorporated into our treatment process ozonation and biologically activated carbon filtration. Additional testing is being coordinated to determine how these improvements impact chlorate formation.

The Poughkeepsies' Joint Water Board takes great pride in providing our communities with high quality, safe drinking water. The regulations and standards set by the EPA, NY State, and local health departments are continuously monitored and improvements are made to our process as needed. As new regulations are implemented you can be certain that the Poughkeepsies' Joint Water Board will take the necessary steps to monitor and maintain the high quality drinking water we provide to the community.

Table 1: UCMR-3 Parameter List

7 Volatile Compounds	**Six Metals**
1,2,3-trichloropropane	vanadium
1,3-butadiene	molybdenum
chloromethane (methyl chloride)	cobalt
1,1-dichloroethane	strontium
bromomethane (methyl bromide)	chromium3
chlorodifluoromethane (HCFC-22)	chromium-6
bromochloromethane (halon 1011)	
	6 Perfluorinated Compounds
1 Synthetic Organic Compound	perfluorooctanesulfonic acid (PFOS)
1,4-dioxane	perfluorooctanoic acid (PFOA)
	perfluorononanoic acid (PFNA)
1 Oxyhalide Anion	perfluorohexanesulfonic acid (PFHxS)
chlorate	perfluoroheptanoic acid (PFHpA)
	perfluorobutanesulfonic acid (PFBS)

Table 2: City of Poughkeepsie UCMR-3 Detected Contaminants

CITY OF POUGHKEEPSIE			
	Detected Amount	**EPA Recommended Limit**	**Other Organizations Recommended Limit**
Chlorate	Forms as a disinfection byproduct when sodium hypochlorite or chlorine dioxide are used for disinfection		
2/23/15	160 µg/L	210 µg/L	
2/23/15	160 µg/L	210 µg/L	
11/19/14	200 µg/L	210 µg/L	
11/19/14	200 µg/L	210 µg/L	
Chromium	Occurs Naturally (21st most abundant element in Earth's crust) & Industrial pollution		
8/18/14	0.29 µg/L	100 µg/L	
8/18/14	0.26 µg/L	100 µg/L	
7/14/14	0.21 µg/L	100 µg/L	
5/28/14	0.33 µg/L	100 µg/L	
Chromium-6	Occurs Naturally & Industrial pollution		
2/23/15	0.047 µg/L	No suggested limit	California MCL=50 µg/L
2/23/15	0.039 µg/L	No suggested limit	California MCL=50 µg/L
1/16/15	0.053 µg/L	No suggested limit	California MCL=50 µg/L
1/16/15	0.052 µg/L	No suggested limit	California MCL=50 µg/L
8/18/14	0.100 µg/L	No suggested limit	California MCL=50 µg/L
8/18/14	0.076 µg/L	No suggested limit	California MCL=50 µg/L
5/28/14	0.061 µg/L	No suggested limit	California MCL=50 µg/L
5/28/14	0.078 µg/L	No suggested limit	California MCL=50 µg/L
Strontium	Occurs naturally		
2/23/15	132 µg/L	1,500 µg/L	
2/23/15	132 µg/L	1,500 µg/L	
11/19/14	178 µg/L	1,500 µg/L	
11/19/14	182 µg/L	1,500 µg/L	
8/18/14	141 µg/L	1,500 µg/L	
8/18/14	132 µg/L	1,500 µg/L	
5/28/14	138 µg/L	1,500 µg/L	
5/28/14	135 µg/L	1,500 µg/L	
Vanadium	Occurs naturally and industrial uses for strengthening steel.		
8/18/14	0.32 µg/L	21 µg/L	
8/18/14	0.25 µg/L	21 µg/L	
5/28/14	0.24 µg/L	21 µg/L	
5/28/14	0.27 µg/L	21 µg/L	

Table 3: Town of Poughkeepsie UCMR-3 Detected Contaminants

TOWN OF POUGHKEEPSIE			
	Detected Amount	**EPA Recommended Limit**	**Other Organizations Recommended Limit**
Chlorate	Forms as a disinfection byproduct when sodium hypochlorite or chlorine dioxide are used for disinfection		
11/4/14	200 µg/L	210 µg/L	
11/4/14	190 µg/L	210 µg/L	
6/5/14	330 µg/L	210 µg/L	
6/5/14	390 µg/L	210 µg/L	
3/19/14	450 µg/L	210 µg/L	
3/19/14	160 µg/L	210 µg/L	
Chromium	Occurs Naturally (21st most abundant element in Earth's crust) & Industrial pollution		
9/17/14	0.32 µg/L	100 µg/L	
9/17/14	0.25 µg/L	100 µg/L	
6/5/14	0.22 µg/L	100 µg/L	
3/19/14	0.22 µg/L	100 µg/L	
12/18/13	0.36 µg/L	100 µg/L	
12/18/13	0.30 µg/L	100 µg/L	
Chromium-6	Occurs Naturally & Industrial pollution		
2/23/15	0.12 µg/L	No suggested limit	California MCL=50 µg/L
2/23/15	0.067 µg/L	No suggested limit	California MCL=50 µg/L
1/16/15	0.058 µg/L	No suggested limit	California MCL=50 µg/L
1/16/15	0.055 µg/L	No suggested limit	California MCL=50 µg/L
8/18/14	0.078 µg/L	No suggested limit	California MCL=50 µg/L
8/18/14	0.053 µg/L	No suggested limit	California MCL=50 µg/L
5/28/14	0.061 µg/L	No suggested limit	California MCL=50 µg/L
Strontium	Occurs naturally		
9/17/14	151 µg/L	1,500 µg/L	
9/17/14	141 µg/L	1,500 µg/L	
6/5/14	123 µg/L	1,500 µg/L	
6/5/14	114 µg/L	1,500 µg/L	
3/19/14	131 µg/L	1,500 µg/L	
3/19/14	144 µg/L	1,500 µg/L	
12/18/13	119 µg/L	1,500 µg/L	
12/18/13	116 µg/L	1,500 µg/L	
Vanadium	Occurs naturally and industrial uses for strengthening steel.		
9/17/14	0.28 µg/L	21 µg/L	
6/5/14	0.3 µg/L	21 µg/L	
6/5/14	0.21 µg/L	21 µg/L	
1,4-dioxane	This compound may enter the environment through its use as a solvent and in textile processing, printing processes, and detergent preparations.		
9/17/14	0.081 µg/L	0.35 to 35 µg/L	Massachusetts = 0.3 µg/L
3/19/14	0.074 µg/L	0.35 to 35 µg/L	Massachusetts = 0.3 µg/L

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