		С	hemical/Radiol	ogical Monitorir	ng			
			M	CLs	Treatment	Techniques	Significant Mon	itoring/Reporting
SDWIS Codes	Contaminant	MCL (mg/*) <sub>1</sub>	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
	Organic Contaminants							
	1,2,4-Trichlorobenzene	0.07	0	0			9	7
	cis-1,2-Dichloroethylene	0.07	0	0			9	7
	Xylenes (total)	10	0	0			9	7
2964	Dichloromethane	0.005	0	0			9	7
2968	o-Dichlorobenzene	0.6	0	0			9	7
	p-Dichlorobenzene	0.075	0	0			9	7
2976	Vinyl chloride	0.002	0	0			9	7
2977	1,1-Dichloroethylene	0.007	0	0			9	7
2979	trans-1,2-Dichloroethylene	0.1	0	0			9	7
2980	1,2-Dichloroethane	0.005	0	0			9	7
2981	1,1,1-Trichloroethane	0.2	0	0			9	7
2982	Carbon Tetrachloride	0.005	0	0			9	7
2983	1,2-Dichloropropane	0.005	0	0			9	7
2984	Trichloroethylene	0.005	0	0			9	7
2985	1,1,2-Trichloroethane	0.005	0	0			9	7
2987	Tetrachloroethylene	0.005	0	0			9	7
2989	Monochlorobenzene	0.1	0	0			9	7
2990	Benzene	0.005	0	0			9	7
2991	Toluene	1	0	0			9	7
2992	Ethylbenzene	0.7	0	0			9	7
2996	Styrene	0.1	0	0			9	7
Synthet	ic Organic Contaminants							
2005	Endrin	0.002	0	0			4	3
2010	Lindane	0.0002	0	0			4	3
2015	Methoxychlor	0.04	0	0			4	3
2020	Toxaphene	0.003	0	0			4	3
2031	Dalapon	0.2	0	0			0	0
2032	Diquat	0.02	0	0			0	0
2033	Endothall	0.1	0	0			0	0
2034	Glyphosate	0.7	0	0			0	0
2035	Di(2-ethylhexyl)adipate	0.4	0	0			0	0
2036	Oxamyl (Vydate)	0.2	0	0			4	3
2037	Simazine	0.004	0	0			4	3
2039	Di(2-ethylhexyl)phthalate	0.006	0	0			0	0
2040	Picloram	0.5	0	0			4	3

2041	Dinoseb	0.007	0	0			4	3
2042	Hexachlorocyclopentadiene	0.05	0	0			4	3
	Aldicarb Sulfoxide	na	J	J			4	3
2044	Aldicarb Sulfone	na					4	3
	Carbofuran	0.04	0	0			4	3
2047	Aldicarb	na	J	J			4	3
2050	Atrazine	0.003	0	0			4	3
2051	Alachlor	0.002	0	0			4	3
	2,3,7,8-TCDD (Dioxin)	3x10-8	0	0			0	0
	Heptachlor	0.0004	0	0			4	3
	Heptachlor epoxide	0.0002	0	0			4	3
	2,4-D	0.07	0	0			4	3
2110	2,4,5-TP	0.05	0	0			4	3
	Hexachlorobenzene	0.001	0	0			4	3
2306	Benzo[a]pyrene	0.0002	0	0			0	0
	Pentachlorophenol	0.001	0	0			4	3
2383	Total polychlorinated biphenyls	0.0005	0	0			4	3
	1,2-Dibromo-3-chloropropane (DBCP)	0.0002	0	0			0	0
2946	Ethylene dibromide	0.00005	0	0			0	0
	Chlordane	0.002	0	0			4	3
2265	Acrylamide				0	0		
					U	0		
	Epichlorohydrin				0	0		
2257								
2257	Epichlorohydrin	10 (as Nitrogen)	0	0			0	0
2257 Inorgan 1038	Epichlorohydrin ic Contaminants	Nitrogen) 10 (as Nitrogen)	0 14	0 10			0 460	0 428
2257 Inorgan 1038 1040** 1041	Epichlorohydrin ic Contaminants  Total nitrate and nitrite  Nitrate**  Nitrite	Nitrogen) 10 (as Nitrogen) 1 (as Nitrogen)	14 0	10			460	428
2257 Inorgan 1038 1040** 1041 1005	Epichlorohydrin ic Contaminants  Total nitrate and nitrite  Nitrate**  Nitrite  Arsenic	Nitrogen) 10 (as Nitrogen) 1 (as Nitrogen) 0.05	14 0 24	10 0 16			460 0 45	428 0 41
2257 Inorgan 1038 1040** 1041 1005 1010	Epichlorohydrin ic Contaminants  Total nitrate and nitrite  Nitrate**  Nitrite  Arsenic  Barium	Nitrogen) 10 (as Nitrogen) 1 (as Nitrogen) 0.05	14 0 24 0	10 0 16 0			460 0 45 3	428 0 41 3
2257 Inorgan 1038 1040** 1041 1005 1010 1015	Epichlorohydrin ic Contaminants  Total nitrate and nitrite  Nitrate**  Nitrite  Arsenic  Barium  Cadmium	Nitrogen) 10 (as Nitrogen) 1 (as Nitrogen) 0.05 2 0.005	14 0 24 0 0	10 0 16 0			460 0 45 3 3	428 0 41 3 3
2257 Inorgan 1038 1040** 1041 1005 1010 1015 1020	Epichlorohydrin ic Contaminants  Total nitrate and nitrite  Nitrate**  Nitrite  Arsenic  Barium  Cadmium  Chromium	Nitrogen) 10 (as Nitrogen) 1 (as Nitrogen) 0.05 2 0.005 0.1	14 0 24 0 0 0	10 0 16 0 0			460 0 45 3 3 3	428 0 41 3 3 3
2257 Inorgan 1038 1040** 1041 1005 1010 1015 1020 1024**	Epichlorohydrin  ic Contaminants  Total nitrate and nitrite  Nitrate**  Nitrite  Arsenic  Barium  Cadmium  Chromium  Cyanide (as free cyanide)**	Nitrogen) 10 (as Nitrogen) 1 (as Nitrogen) 0.05 2 0.005 0.1 0.2	14 0 24 0 0 0	10 0 16 0 0 0			460 0 45 3 3 3 0	428 0 41 3 3 3 0
2257 Inorgan 1038 1040** 1041 1005 1010 1015 1020 1024** 1025	Epichlorohydrin  ic Contaminants  Total nitrate and nitrite  Nitrate**  Nitrite  Arsenic  Barium  Cadmium  Chromium  Cyanide (as free cyanide)**  Fluoride	Nitrogen) 10 (as Nitrogen) 1 (as Nitrogen) 0.05 2 0.005 0.1 0.2 4	14 0 24 0 0 0 0	10 0 16 0 0 0 0			460 0 45 3 3 3 0	428 0 41 3 3 3 0 0
2257 Inorgan 1038 1040** 1041 1005 1010 1015 1020 1024** 1025 1035	Epichlorohydrin  ic Contaminants  Total nitrate and nitrite  Nitrate**  Nitrite  Arsenic  Barium  Cadmium  Chromium  Cyanide (as free cyanide)**  Fluoride  Mercury	Nitrogen) 10 (as Nitrogen) 1 (as Nitrogen) 0.05 2 0.005 0.1 0.2 4 0.002	14 0 24 0 0 0	10 0 16 0 0 0			460 0 45 3 3 3 0 0	428 0 41 3 3 3 0 0 0 3
2257 Inorgan 1038 1040** 1041 1005 1010 1015 1020 1024** 1025 1035 1036	Epichlorohydrin ic Contaminants  Total nitrate and nitrite  Nitrate**  Nitrite  Arsenic  Barium  Cadmium  Chromium  Cyanide (as free cyanide)**  Fluoride  Mercury  Nickel	Nitrogen) 10 (as Nitrogen) 1 (as Nitrogen) 0.05 2 0.005 0.1 0.2 4 0.002 na	14 0 24 0 0 0 0 0	10 0 16 0 0 0 0			460 0 45 3 3 3 0 0 0 3 3	428 0 41 3 3 3 0 0 0 3 3
2257 Inorgan 1038 1040** 1041 1005 1010 1015 1020 1024** 1025 1035 1036 1045	Epichlorohydrin  ic Contaminants  Total nitrate and nitrite  Nitrate**  Nitrite  Arsenic  Barium  Cadmium  Chromium  Cyanide (as free cyanide)**  Fluoride  Mercury  Nickel  Selenium	Nitrogen) 10 (as Nitrogen) 1 (as Nitrogen) 0.05 2 0.005 0.1 0.2 4 0.002 na 0.05	14 0 24 0 0 0 0 0 0	10 0 16 0 0 0 0 0			460 0 45 3 3 3 0 0 0 3 3 3	428 0 41 3 3 3 0 0 0 3 3 3
2257 Inorgan 1038 1040** 1041 1005 1010 1015 1020 1024** 1025 1035 1036 1045 1074	Epichlorohydrin  ic Contaminants  Total nitrate and nitrite  Nitrate**  Nitrite  Arsenic  Barium  Cadmium  Chromium  Cyanide (as free cyanide)**  Fluoride  Mercury  Nickel  Selenium  Antimony	Nitrogen) 10 (as Nitrogen) 1 (as Nitrogen) 0.05 2 0.005 0.1 0.2 4 0.002 na 0.05 0.006	14 0 24 0 0 0 0 0 0 0	10 0 16 0 0 0 0 0 0			460 0 45 3 3 3 0 0 0 3 3 3 3	428 0 41 3 3 3 0 0 0 3 3 3 3
2257 Inorgan 1038 1040** 1041 1005 1010 1015 1020 1024** 1025 1035 1036 1045 1074	Epichlorohydrin  ic Contaminants  Total nitrate and nitrite  Nitrate**  Nitrite  Arsenic  Barium  Cadmium  Chromium  Cyanide (as free cyanide)**  Fluoride  Mercury  Nickel  Selenium	Nitrogen) 10 (as Nitrogen) 1 (as Nitrogen) 0.05 2 0.005 0.1 0.2 4 0.002 na 0.05	14 0 24 0 0 0 0 0 0	10 0 16 0 0 0 0 0			460 0 45 3 3 3 0 0 0 3 3 3	428 0 41 3 3 3 0 0 0 3 3 3

**State:** Michigan Combined Community/Noncommunity Water Supply

Reporting Interval: January 1, 2018- December 31, 2018

1094	Asbestos	7 million fibers/	0	0			0	0
Radionu	ıclides							
4000	Gross Alpha	15 pCi/l	0	0			1	1
4006	Combined Uranium	30 ug/l	0	0			0	0
4010	Radium 226 and Radium 228	5 pCi/l	5	3			3	3
4100	Gross Beta	4 mrem/yr	0	0			0	0
	All Chemical Groups Subtotal		43	29	0	0	817	473

	Revised Total Coliform Rule (Effective April 2016)									
			M	MCLs Treatment Techniques S				itoring/Reporting		
SDWIS Codes	Contaminant	MCL (mg/*)1	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations		
1A	Acute MCL (E. coli)	Presence	22	21						
2A	Level 1 Assessment				2	2				
2B	Level 2 Assessment				2	2				
2C	Corrective action(s)				5	4				
2D	Startup procedures				121	121				
3A	Major routine monitoring						2819	1476		
3B	Additional monitoring (seasonal supplies)						1	1		
3C	Sampling during turbidity exceedence						0	0		
3D	Certified lab and/or lab method error						0	0		
4D	Notify state of E. coli positive						0	0		
4E	Notify state of E. coli MCL						0	0		
4F	Notify state of other violations						0	0		
5A	Sampling Siting Plan errors						4	4		
5B	Recordkeeping						0	0		
	RTCR Subtotal		22	21	130	124	2824	1480		

	Lead and Copper Rule									
			M	CLs	Treatment	Techniques	Significant Mon	itoring/Reporting		
SDWIS Codes	Contaminant	MCL (mg/*) <sub>1</sub>	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations		
51	Initial lead and copper tap M/R						86	58		
52	Routine lead and copper tap M/R						131	124		
53	Water Quality Parameter M/R						5	5		
56	Source Water M/R						1	1		
57	Treatment study or recommendation				1	1				
58	Treatment installation or demonstration				0	0				
59	WQP level noncompliance				3	2				
63	Copper, Free				0	0				
64	Lead Service Line Replacement				0	0				
65	Public Education				0	0				
66	Lead Consumer Notification						137	126		
	LCR Subtotal				4	3	360	266		

	Consumer Confidence Report Rule								
			M	CLs	Treatment Techniques		Significant Monitoring/Reporting		
SDWIS Codes	Contaminant	MCL (mg/*)1	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	
71	Failure to produce CCR						29	26	
	CCR Subtotal						29	26	

	Public Notification Rule									
			M	CLs	Techniques	Significant Monitoring/Reporting				
SDWIS Codes	Contaminant	MCL (mg/*)1	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations		
75	PN for NPDWR violation						6	6		
	PN Subtotal						6	6		

	Surface Water Treatment Rules								
			M	CLs	Treatment	Techniques	Significant Mon	itoring/Reporting	
SDWIS Codes	Contaminant	MCL (mg/*) <sub>1</sub>	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	
9	Failure to keep proper records						0	0	
29	Individual filter triggered activities						0	0	
32	Source Monitoring (LT2)						6	1	
33	Failure to submit bin class (LT2)						0	0	
36	Monitoring (SWTR-Filtered)						0	0	
	Monitor/report required parameters						1	1	
37	Failure to profile / consult				0	0			
	Turbidity / disinfection residual				0	0			
41-0800	Failure of microbial treatment (LT2)				0	0			
42-0200	Failure to filter				0	0			
42-0800	Failure to provide LT2 treatment				0	0			
43	Combined filter effluent > 1 NTU				0	0			
44	> 5% comb. filter effluent > 0.3 NTU				0	0			
45	Failure to address deficiency				0	0			
47	Uncovered finished water storage				0	0			
	SWTRs Subtotal				0	0	7	2	

		Disinfect	ants and Disinf	fection Byprodu	cts Rules			
			MCLs /	MRDLs	Treatment	Techniques	Significant Mon	itoring/Reporting
SDWIS Codes	Contaminant	MCL / MRDL (mg/*)1	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
1009	Chlorite	1.0	0	0			0	0
1011	Bromate	0.010	0	0			0	0
2456	Total Haloacetic Acids	0.060	0	0			67	63
2950	Total Trihalomethanes	0.080	6	4			68	64
2920	Carbon, Total						2	2
0999	Chlorine	4.0	0	0			11	11
1006	Chloramines	4.0	0	0			0	0
35	Failure to Submit OEL for TTHM		0	0			0	0
11/1008	Chlorine Dioxide, non-acute	0.8	0	0			0	0
13/1008	Chlorine Dioxide, acute	0.8	0	0				
12	Certified treatment plant operator				0	0		
46	Inadequate precusor removal (TOC)				5	3		
	DBPRs Subtotal		6	4	5	0	148	76

**State:** Michigan Combined Community/Noncommunity Water Supply

	Ground Water Rule								
			M	CLs	Treatment	Techniques		Monitoring/ ng/Other	
SDWIS Codes	Contaminant	MCL (mg/*) <sub>1</sub>	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	
19	Source water assessment monitoring						0	0	
31	Failure to monitor treatment (4-log)						0	0	
34	Failure to monitor source water						24	24	
41	Failure of microbial treatment (4-log)				0	0			
42	Failure to provide treatment				0	0			
45	Failure to address significant deficiency				12	8			
48	Failure to address contamination				0	0			
5	Failure to notify state						0	0	
9	Failure to maintain records						0	0	
20	Failure to consult with state						5	5	
28	Sanitary survey cooperation failure						0	0	
73	Failure to notify consecutive system(s)						0	0	
	GWR Subtotal				12	8	29	29	

<sup>&</sup>lt;sup>1</sup> Values are in milligrams per liter (mg/l), unless otherwise specified.

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Summary Table	
Total Number of Regulated Systems	10,627
Total Number of Systems in Violation	
(generally lower than the total number of violations, as one	2,057
system may violate multiple requirements)	
Total Number of Violations	4,442