ICPSR | INTER-UNIVERSITY CONSORTIUM FOR POLITICAL AND SOCIAL RESEARCH

ICPSR 37217

PFAS Results in Community Water Supplies (CWS) in Michigan, 2018

Michigan. Department of Environmental Quality

ICPSR Codebook

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ICPSR PROCESSING NOTES FOR #37217
PFAS Results in Community Water Supplies (CWS) in Michigan, 2018

1. **Sequential Record Identifier**: ICPSR created a unique sequential record identifier variable named **CASEID.**

2. **Variable Names**: ICPSR has modified the following variable names in order to conform to variable name length limitations in the various statistical packages**:**

Original Variable Name	ICPSR Variable Name
Raw_Water_or_Treated_Drinking_Water_	RAW_OR_TREATED
PFOA___PFOS__ppt_	PFOA_PFOS_PPT
Total_Tested_PFAS__ppt_	TOTAL_TESTED_PFAS_PPT

3. **Discrepancy in Values:** ICPSR noticed discrepancies in some values in the following variables and was not able to provide further information:

Variable Name	Discrepancies
SAMPLING_DATE	"28-SEP-2017" (2 cases) -- Out of Scope "26-JUN-3028" (1 case) -- Typo
RAW_OR_TREATED	"_" (1 case) -- Undocumented

4. **Additional Information**: The data were downloaded from Michigan's Open Data Portal PFAS Results in CWS page on November 9, 2018. The data are updated regularly by the State of Michigan; if these data have been updated since the download date, the most up-to-date version of the data will be available via the link provided.

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Variable Description and Frequencies

Note: Frequencies displayed for the variables are not weighted. They are purely descriptive and may not be representative of the study population. Please review any sampling or weighting information available with the study.

Summary statistics (minimum, maximum, arithmetic mean, median, mode, and standard deviation) may not be available for every variable in the codebook. Conversely, a listing of frequencies in table format may not be present for every variable in the codebook either. However, all variables in the dataset are present and display sufficient information about each variable. These decisions are made intentionally and are at the discretion of the archive producing this codebook.

CASEID: CASE IDENTIFICATION NUMBER

Based upon 1,099 valid cases out of 1,099 total cases.

Location: 183-186 (width: 4; decimal: 0)
Variable Type: numeric

COUNTY: County

Value	Label	Unweighted Frequency	%
ALGER	-	8	0.7 %
ALLEGAN	-	74	6.7 %
ANTRIM	-	12	1.1 %
BARAGA	-	9	0.8 %
BARRY	-	23	2.1 %
BERRIEN	-	55	5.0 %
BRANCH	-	11	1.0 %
CALHOUN	-	18	1.6 %
CASS	-	13	1.2 %
CHARLEVOIX	-	5	0.5 %
CHIPPEWA	-	6	0.5 %
CLINTON	-	12	1.1 %
DELTA	-	7	0.6 %
DICKINSON	-	1	0.1 %
EATON	-	19	1.7 %
EMMET	-	28	2.5 %
GENESEE	-	39	3.5 %
GOGEBIC	-	9	0.8 %
GRAND TRAVERSE	-	4	0.4 %
GRATIOT	-	4	0.4 %
HILLSDALE	-	9	0.8 %
HOUGHTON	-	7	0.6 %
INGHAM	-	43	3.9 %
IONIA	-	16	1.5 %
IRON	-	13	1.2 %
ISBELLA	-	1	0.1 %
JACKSON	-	38	3.5 %
KALAMAZOO	-	52	4.7 %
KENT	-	52	4.7 %
KEWEENAW	-	4	0.4 %
LAKE	-	5	0.5 %
LAPEER	-	12	1.1 %

Value	Label	Unweighted Frequency	%
LEELANAU	-	9	0.8 %
LENAWEE	-	31	2.8 %
LIVINGSTON	-	49	4.5 %
LUCE	-	3	0.3 %
MANISTEE	-	1	0.1 %
MARQUETTE	-	33	3.0 %
MENOMINEE	-	3	0.3 %
MONROE	-	8	0.7 %
MONTCALM	-	20	1.8 %
MUSKEGON	-	38	3.5 %
NEWAYGO	-	13	1.2 %
OAKLAND	-	129	11.7 %
ONTONAGON	-	11	1.0 %
OSCEOLA	-	17	1.5 %
OTSEGO	-	12	1.1 %
OTTAWA	-	6	0.5 %
SAGINAW	-	6	0.5 %
SCHOOLCRAFT	-	5	0.5 %
	Total	**1,099**	**100%**

Please note that only the first 50 response categories are displayed in the PDF codebook. To view all response categories, please analyze the data file in the statistical package of your choice (SAS, SPSS, Stata, R).

Based upon 1,099 valid cases out of 1,099 total cases.

Location: 1-14 (width: 14; decimal: 0)
Variable Type: character

PUBLIC_WATER_SUPPLY: Public water supply

Value	Label	Unweighted Frequency	%
553 Mobile Estates	-	1	0.1 %
Adams Township	-	1	0.1 %
Addison	-	1	0.1 %
Adrian	-	3	0.3 %
Alamo Nursing Home	-	1	0.1 %
Alan's Park - Durand	-	1	0.1 %
Alan's Park - Fowlerville	-	1	0.1 %
Alanson Estates Mobile Home Park	-	1	0.1 %
Albion	-	1	0.1 %
Algoma Estates	-	1	0.1 %
Allegan	-	1	0.1 %

Value	Label	Unweighted Frequency	%
Allegan County Services Center	-	1	0.1 %
Allegan Mobile Estates	-	1	0.1 %
Alpha	-	1	0.1 %
Alto Meadows	-	1	0.1 %
Andrews Estates	-	1	0.1 %
Andrews Mobile Home Park	-	1	0.1 %
Ann Arbor	-	3	0.3 %
Apple Carr Village	-	1	0.1 %
Apple Grove Estates	-	1	0.1 %
Applewood	-	1	0.1 %
Arbor Ridge Condominiums	-	1	0.1 %
Arbor View Condo Owners Association	-	1	0.1 %
Arbor Village	-	1	0.1 %
Argentine Care Center	-	2	0.2 %
Arlington Woods	-	5	0.5 %
Ashley, Village of	-	1	0.1 %
Athens	-	2	0.2 %
Augusta	-	1	0.1 %
Austin Commons II	-	1	0.1 %
Autumn Hills	-	1	0.1 %
Avra Estates	-	2	0.2 %
Baldwin, Village of	-	5	0.5 %
Baltimore Terrace	-	1	0.1 %
Bangor	-	4	0.4 %
Baraga	-	3	0.3 %
Barron Lake/Rosebush	-	1	0.1 %
Barry Township	-	2	0.2 %
Barry's Resort	-	2	0.2 %
Barton Hills	-	2	0.2 %
Baseline Mobile Home Park	-	1	0.1 %
Bates Township	-	2	0.2 %
Battle Creek - Verona System	-	1	0.1 %
Bavarian Softwater Village	-	1	0.1 %
Bay Shore Estates	-	1	0.1 %
Bean Creek Resort	-	1	0.1 %
Bear Creek Estates Condominium	-	1	0.1 %
Beaver Creek Resort	-	1	0.1 %
Bedford Hills	-	2	0.2 %
Bedford Meadows	-	2	0.2 %

Value	Label	Unweighted Frequency	%
	Total	**1,099**	**100%**

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Based upon 1,099 valid cases out of 1,099 total cases.

Location: 15-86 (width: 72; decimal: 0)
Variable Type: character

POPULATION_SERVED: Population served

Value	Label	Unweighted Frequency	%
16	-	1	0.1 %
20	-	1	0.1 %
24	-	5	0.5 %
25	-	6	0.5 %
26	-	1	0.1 %
30	-	7	0.6 %
31	-	2	0.2 %
32	-	1	0.1 %
35	-	2	0.2 %
36	-	2	0.2 %
37	-	1	0.1 %
38	-	2	0.2 %
39	-	1	0.1 %
40	-	12	1.1 %
43	-	1	0.1 %
45	-	2	0.2 %
48	-	1	0.1 %
50	-	19	1.7 %
52	-	3	0.3 %
54	-	4	0.4 %
55	-	4	0.4 %
56	-	6	0.5 %
57	-	4	0.4 %
58	-	4	0.4 %
60	-	7	0.6 %
62	-	2	0.2 %
64	-	2	0.2 %
65	-	7	0.6 %
66	-	1	0.1 %

Value	Label	Unweighted Frequency	%
67	-	1	0.1 %
68	-	3	0.3 %
70	-	2	0.2 %
72	-	2	0.2 %
74	-	1	0.1 %
75	-	10	0.9 %
76	-	2	0.2 %
77	-	2	0.2 %
78	-	1	0.1 %
80	-	5	0.5 %
82	-	6	0.5 %
84	-	8	0.7 %
85	-	1	0.1 %
86	-	1	0.1 %
87	-	4	0.4 %
88	-	3	0.3 %
90	-	6	0.5 %
92	-	1	0.1 %
94	-	3	0.3 %
95	-	7	0.6 %
96	-	3	0.3 %
	Total	**1,099**	**100%**

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Based upon 1,099 valid cases out of 1,099 total cases.

- Mean: 46333.26
- Minimum: 16.00
- Maximum: 3689400.00
- Standard Deviation: 368093.66

Location: 87-93 (width: 7; decimal: 0)
Variable Type: numeric

SAMPLING_DATE: Sampling date

Value	Label	Unweighted Frequency	%
01-AUG-2018	-	24	2.2 %
01-JUN-2018	-	3	0.3 %
01-OCT-2018	-	1	0.1 %
02-AUG-2018	-	29	2.6 %

Value	Label	Unweighted Frequency	%
02-JUL-2018	-	6	0.5 %
03-AUG-2018	-	12	1.1 %
03-JUL-2018	-	9	0.8 %
04-JUN-2018	-	11	1.0 %
04-SEP-2018	-	5	0.5 %
05-JUL-2018	-	14	1.3 %
05-JUN-2018	-	11	1.0 %
05-SEP-2018	-	4	0.4 %
06-AUG-2018	-	13	1.2 %
06-JUL-2018	-	22	2.0 %
06-JUN-2018	-	20	1.8 %
07-AUG-2018	-	16	1.5 %
07-JUN-2018	-	7	0.6 %
08-AUG-2018	-	18	1.6 %
08-JUN-2018	-	10	0.9 %
09-AUG-2018	-	10	0.9 %
09-JUL-2018	-	32	2.9 %
10-AUG-2018	-	3	0.3 %
10-JUL-2018	-	15	1.4 %
10-SEP-2018	-	16	1.5 %
11-JUL-2018	-	17	1.5 %
11-JUN-2018	-	20	1.8 %
11-SEP-2018	-	4	0.4 %
12-JUL-2018	-	11	1.0 %
12-JUN-2018	-	17	1.5 %
12-SEP-2018	-	3	0.3 %
13-AUG-2018	-	15	1.4 %
13-JUL-2018	-	13	1.2 %
13-JUN-2018	-	22	2.0 %
14-AUG-2018	-	26	2.4 %
14-JUN-2018	-	21	1.9 %
14-SEP-2018	-	2	0.2 %
15-AUG-2018	-	31	2.8 %
15-JUN-2018	-	21	1.9 %
16-APR-2018	-	4	0.4 %
16-AUG-2018	-	25	2.3 %
16-JUL-2018	-	10	0.9 %
17-APR-2018	-	7	0.6 %
17-AUG-2018	-	9	0.8 %

Value	Label	Unweighted Frequency	%
17-JUL-2018	-	21	1.9 %
18-APR-2018	-	7	0.6 %
18-JUL-2018	-	18	1.6 %
18-JUN-2018	-	15	1.4 %
18-OCT-2018	-	1	0.1 %
18-SEP-2018	-	11	1.0 %
19-APR-2018	-	4	0.4 %
	Total	**1,099**	**100%**

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Based upon 1,099 valid cases out of 1,099 total cases.

Location: 94-104 (width: 11; decimal: 0)
Variable Type: character

SAMPLE_NUMBER: Sample number

Value	Label	Unweighted Frequency	%
GW1804161020JNR	-	1	0.1 %
GW1804161110JNR	-	1	0.1 %
GW1804161320GSC	-	1	0.1 %
GW1804161400GSC	-	1	0.1 %
GW1804170930GSC	-	1	0.1 %
GW1804171020GSC	-	1	0.1 %
GW1804171110GSC	-	1	0.1 %
GW1804171125GSC	-	1	0.1 %
GW1804171425GSC	-	1	0.1 %
GW1804171515CKA	-	1	0.1 %
GW1804171535CKA	-	1	0.1 %
GW1804180915CKA	-	1	0.1 %
GW1804180950CKA	-	1	0.1 %
GW1804181245CKA	-	1	0.1 %
GW1804181255CKA	-	1	0.1 %
GW1804181415CKA	-	1	0.1 %
GW1804181425CKA	-	1	0.1 %
GW1804181430CKA	-	1	0.1 %
GW1804190905CKA	-	1	0.1 %
GW1804191100CKA	-	1	0.1 %
GW1804191120CKA	-	1	0.1 %
GW1804191320CKA	-	1	0.1 %

Value	Label	Unweighted Frequency	%
GW1804231145GSC	-	1	0.1 %
GW1804231205GSC	-	1	0.1 %
GW1804231325GSC	-	1	0.1 %
GW1804231420GSC	-	1	0.1 %
GW1804231500GSC	-	1	0.1 %
GW1804231530GSC	-	1	0.1 %
GW1804240945GSC	-	1	0.1 %
GW1804241010GSC	-	1	0.1 %
GW1804241040GSC	-	1	0.1 %
GW1804241120GSC	-	1	0.1 %
GW1804241130GSC	-	1	0.1 %
GW1804241300GSC	-	1	0.1 %
GW1804241310GSC	-	1	0.1 %
GW1804250935GSC	-	1	0.1 %
GW1804251045GSC	-	1	0.1 %
GW1804251100GSC	-	1	0.1 %
GW1804251120GSC	-	1	0.1 %
GW1804251245GSC	-	1	0.1 %
GW1804251300GSC	-	1	0.1 %
GW1804251400GSC	-	1	0.1 %
GW1804251430GSC	-	1	0.1 %
GW1804260915GSC	-	1	0.1 %
GW1804260940GSC	-	1	0.1 %
GW1804260950GSC	-	1	0.1 %
GW1804261045GSC	-	1	0.1 %
GW1804261130GSC	-	1	0.1 %
GW1804261155GSC	-	1	0.1 %
GW1804261305GSC	-	1	0.1 %
Total		**1,099**	**100%**

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Based upon 1,099 valid cases out of 1,099 total cases.

Location: 105-134 (width: 30; decimal: 0)
Variable Type: character

RAW_OR_TREATED: Raw water or treated drinking water

Value	Label	Unweighted Frequency	%
Raw Water	-	505	46.0 %

Value	Label	Unweighted Frequency	%
Treated Drinking Water	-	593	54.0 %
_	-	1	0.1 %
	Total	**1,099**	**100%**

Based upon 1,099 valid cases out of 1,099 total cases.

Location: 135-156 (width: 22; decimal: 0)
Variable Type: character

PFOA_PFOS_PPT: Perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) parts per trillion (ppt)

Value	Label	Unweighted Frequency	%
1,110	-	1	0.1 %
1,410	-	1	0.1 %
1,520	-	1	0.1 %
11	-	1	0.1 %
13	-	1	0.1 %
18	-	1	0.1 %
19	-	1	0.1 %
2	-	21	1.9 %
20	-	1	0.1 %
23	-	2	0.2 %
234	-	1	0.1 %
26	-	1	0.1 %
280	-	1	0.1 %
29	-	1	0.1 %
3	-	11	1.0 %
390	-	1	0.1 %
4	-	12	1.1 %
5	-	2	0.2 %
6	-	4	0.4 %
7	-	2	0.2 %
8	-	1	0.1 %
ND	-	1031	93.8 %
	Total	**1,099**	**100%**

Based upon 1,099 valid cases out of 1,099 total cases.

Location: 157-161 (width: 5; decimal: 0)
Variable Type: character

TOTAL_TESTED_PFAS_PPT: Total tested per- and polyfluoroalkyl substances (PFAS) parts per trillion (ppt)

Value	Label	Unweighted Frequency	%
1,290	-	1	0.1 %
1,600	-	1	0.1 %
1,828	-	1	0.1 %
10	-	3	0.3 %
11	-	1	0.1 %
12	-	2	0.2 %
13	-	2	0.2 %
15	-	3	0.3 %
18	-	2	0.2 %
19	-	1	0.1 %
2	-	39	3.5 %
20	-	3	0.3 %
21	-	1	0.1 %
22	-	1	0.1 %
24	-	1	0.1 %
271	-	1	0.1 %
29	-	1	0.1 %
3	-	20	1.8 %
327	-	1	0.1 %
33	-	1	0.1 %
36	-	1	0.1 %
39	-	2	0.2 %
4	-	13	1.2 %
43	-	1	0.1 %
466	-	1	0.1 %
49	-	1	0.1 %
5	-	5	0.5 %
50	-	1	0.1 %
52	-	1	0.1 %
54	-	1	0.1 %
6	-	5	0.5 %
64	-	1	0.1 %
69	-	1	0.1 %
7	-	3	0.3 %
72	-	1	0.1 %
8	-	9	0.8 %
9	-	4	0.4 %

Value	Label		Unweighted Frequency	%
ND	-		962	87.5 %
	Total		**1,099**	**100%**

Based upon 1,099 valid cases out of 1,099 total cases.

Location: 162-166 (width: 5; decimal: 0)
Variable Type: character

METHOD: Method

Value	Label	Unweighted Frequency	%
EPA 537 Rev. 1.1	-	1032	93.9 %
Isotope Dilution	-	67	6.1 %
	Total	**1,099**	**100%**

Based upon 1,099 valid cases out of 1,099 total cases.

Location: 167-182 (width: 16; decimal: 0)
Variable Type: character