



MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

# PFAS Testing in Michigan's Public Drinking Water

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# TAKING ACTION, PROTECTING MICHIGAN

[HEALTH](#)[TESTING AND TREATMENT](#)[MICHIGAN PFAS SITES](#)[FISH AND WILDLIFE](#)[PFAS FOAM](#)[ABOUT MPART](#)

August 16, 2019

VIEW THE REPORT FROM THE **2018 PFAS SAMPLING OF DRINKING WATER SUPPLIES** IN MICHIGAN.

## TAKING ACTION TO PROTECT THE PUBLIC'S WATER

Per- and polyfluoroalkyl substances (PFAS) are a large group of man-made chemicals that include perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). PFAS have been used globally during the past century in manufacturing, firefighting and thousands of common household and other consumer products. These chemicals are persistent in the environment and in the human body – meaning they don't break down and they can accumulate over time. In recent years, experts have become increasingly concerned by the potential effects of high concentrations of PFAS on human health.

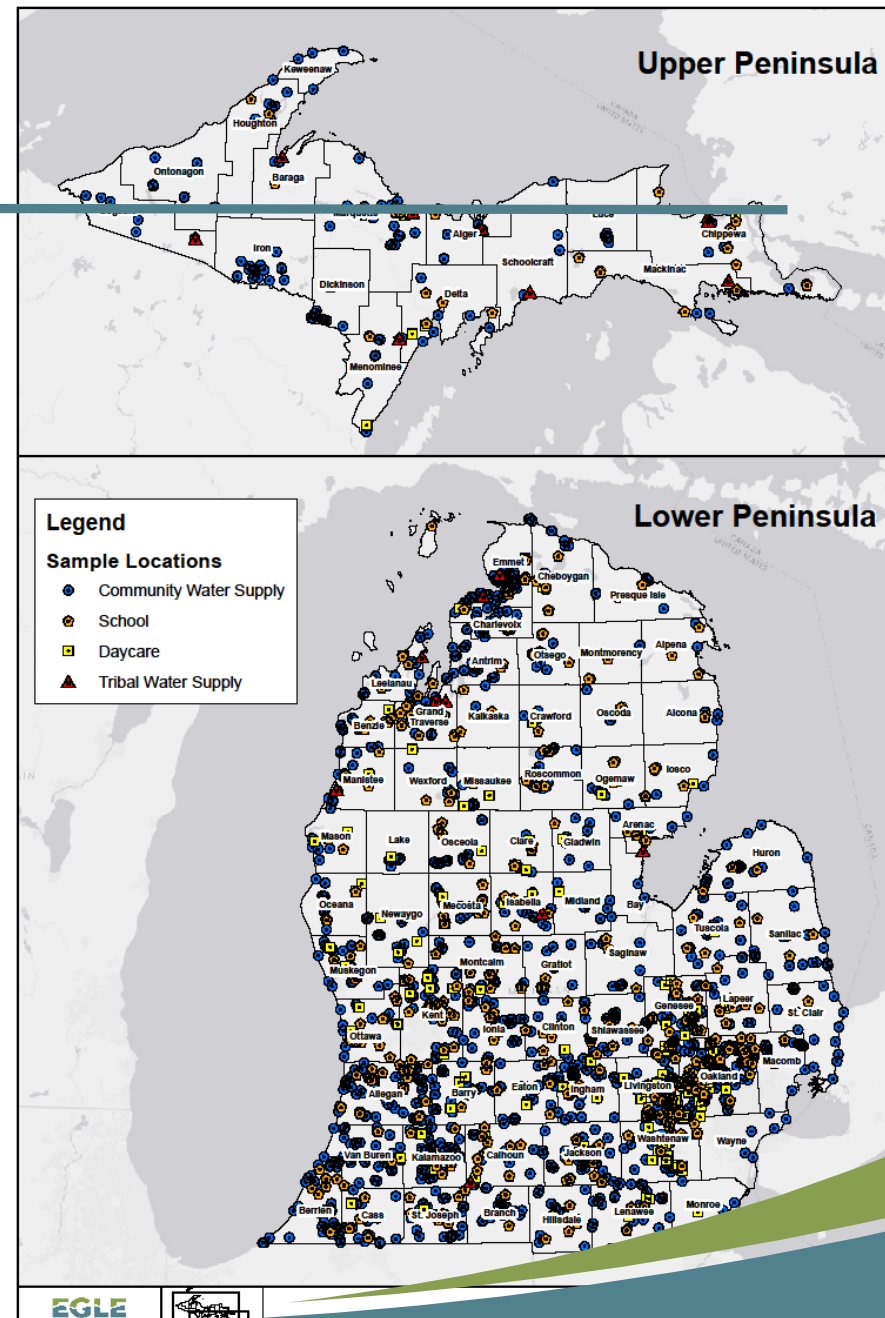
Although there is still more to learn about PFAS and human health, the State of Michigan takes this issue seriously and is one of the first states in the nation to establish a clean-up standard for PFAS in groundwater used for drinking water.

The Michigan PFAS Action Response Team (MPART) builds on previous work to research, identify, recommend, and implement PFAS response actions throughout the state. Agencies representing health, environment, natural resources, and other



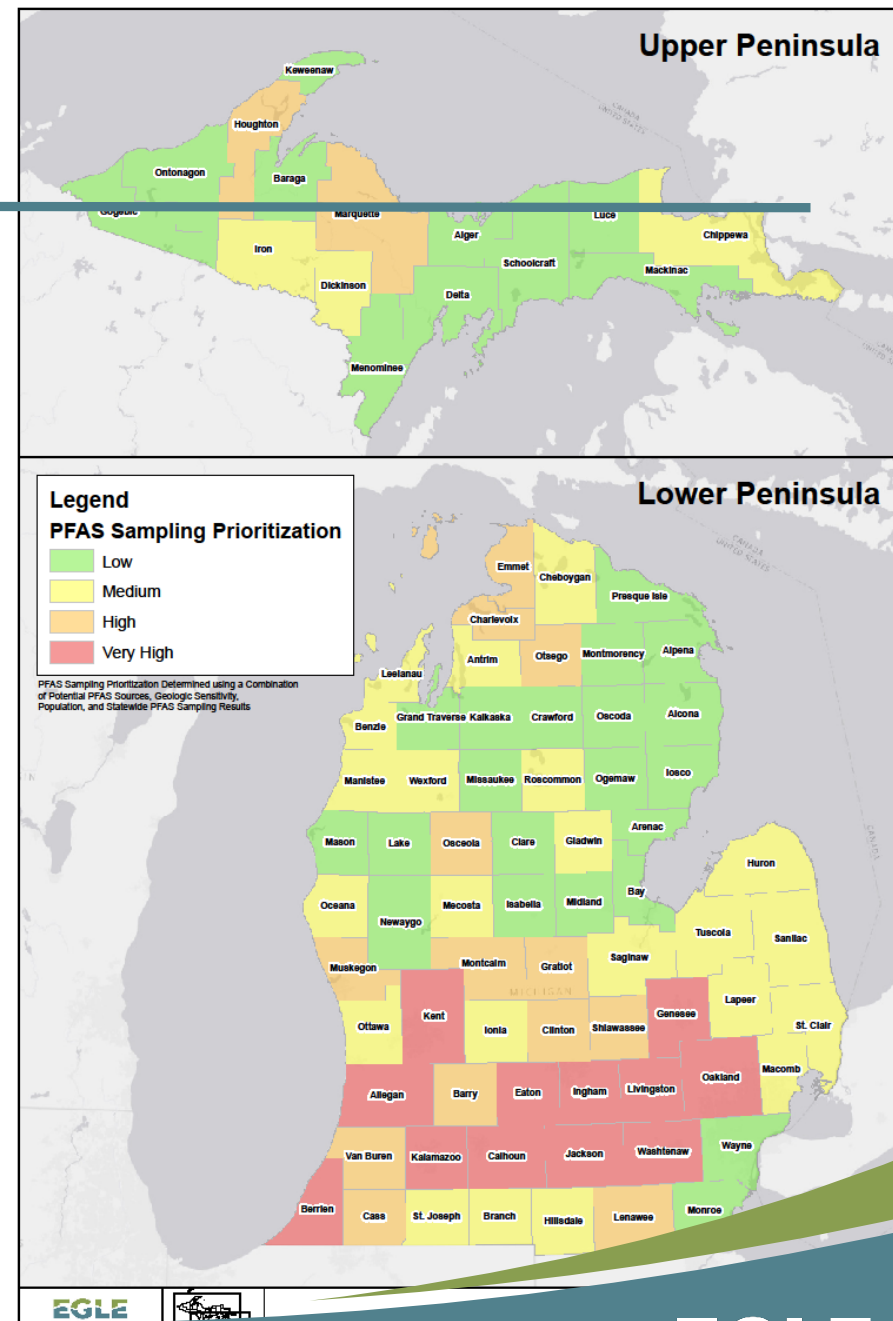
# Phase I (2018)

- Supplies selected for the Statewide Survey included:
  - Community Water Supplies (CWS) with their own source
  - Select Noncommunity Water Supplies serving Schools/Child Care
  - 12 Federally Recognized Tribes in Michigan
- Supplies sampled serve approximately 75% of the total population of our state.



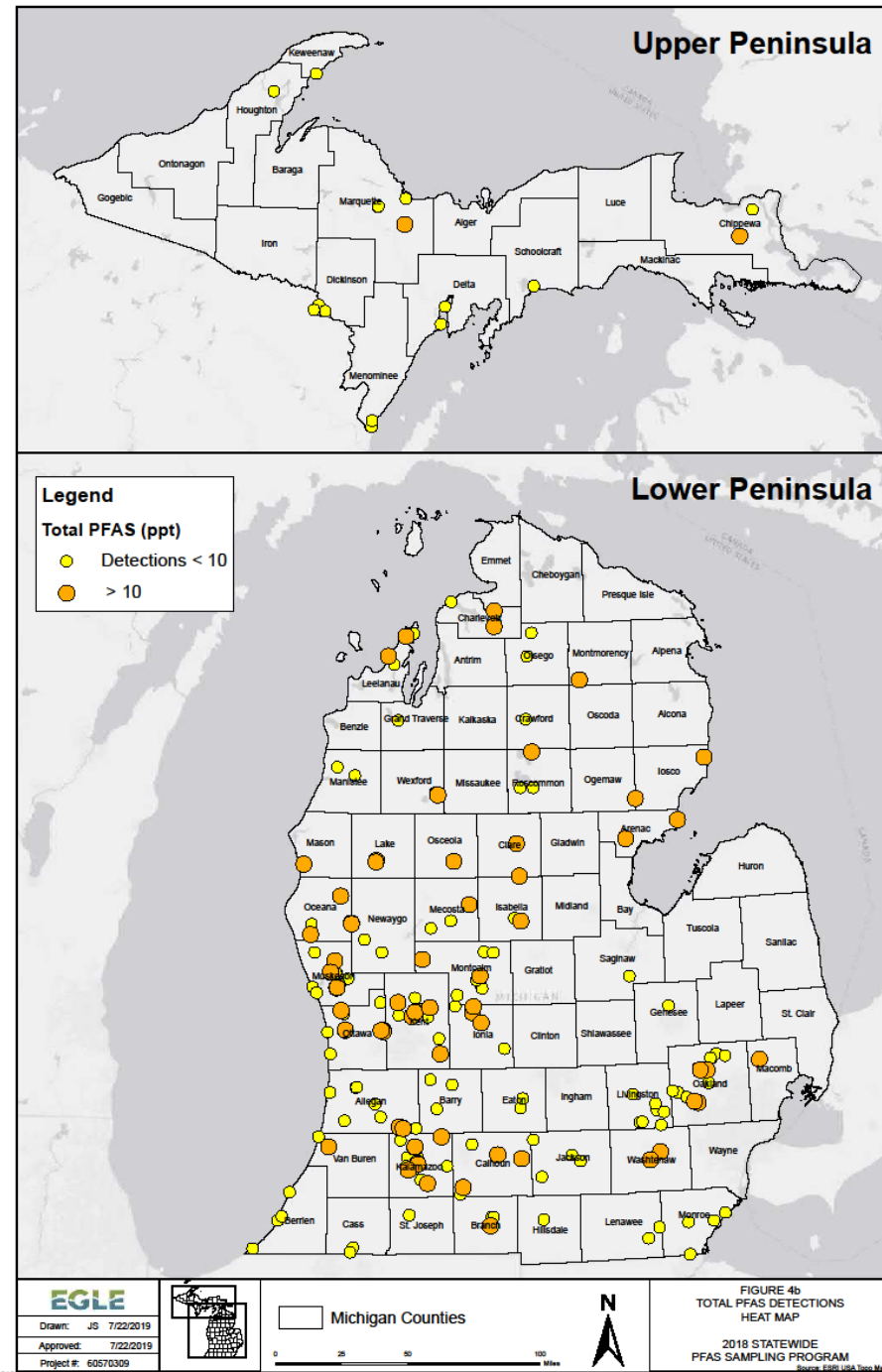
# Phase I (2018)

- Sampling schedule priority was assigned using available information, including:
  - Wellhead protection areas
  - Geological sensitivity
  - Potential PFAS sources
  - Regional population density
- This prioritization protocol led to the early identification of contamination in the **Parchment, Michigan CWS**.



# Phase I Results

- 1,562 of 1,741 systems tested returned non-detect for all PFAS analytes (approximately 90%)
- 179 systems returned a detection for at least one PFAS analyte
  - 115 of these fell into the “low” results tier (< 10 parts per trillion (ppt) Total Tested PFAS)
  - 64 systems returned a detection of  $\geq 10$  ppt for at least one PFAS analyte
  - US EPA Lifetime Health Advisory exceedance at Parchment, Michigan and Robinson Elementary (> 70 ppt PFOA + PFOS)

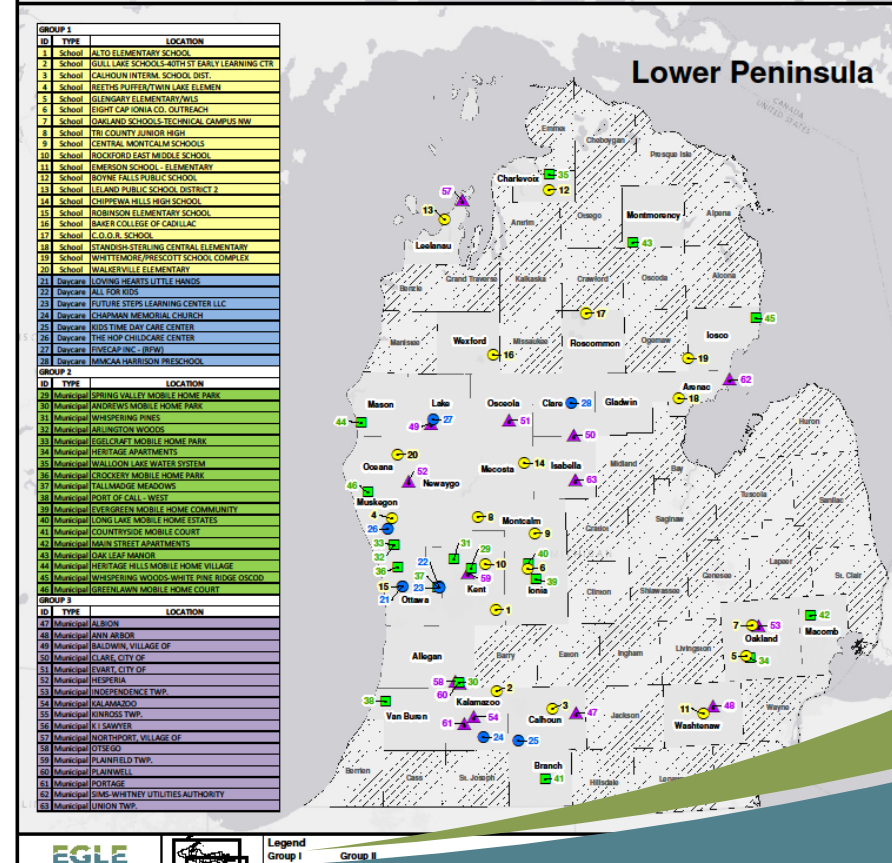
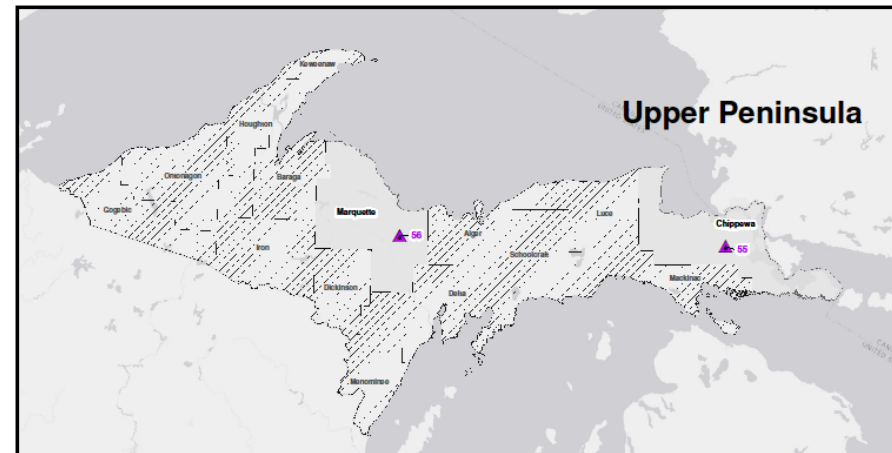




# Quarterly Monitoring

Public Water Supplies with results  $\geq 10$  ppt during Phase I of the Statewide Survey

- 63 supplies
  - 33 Type I CWS with groundwater source
  - 2 Type I CWS with surface water source
  - 20 Schools on own well
  - 8 Child Care/Michigan Head Starts on own well
- March/June/September/December 2019
- Investigate potential seasonality in PFAS levels
- Consistent with MPART and EGLE recommendations to these supplies in 2018

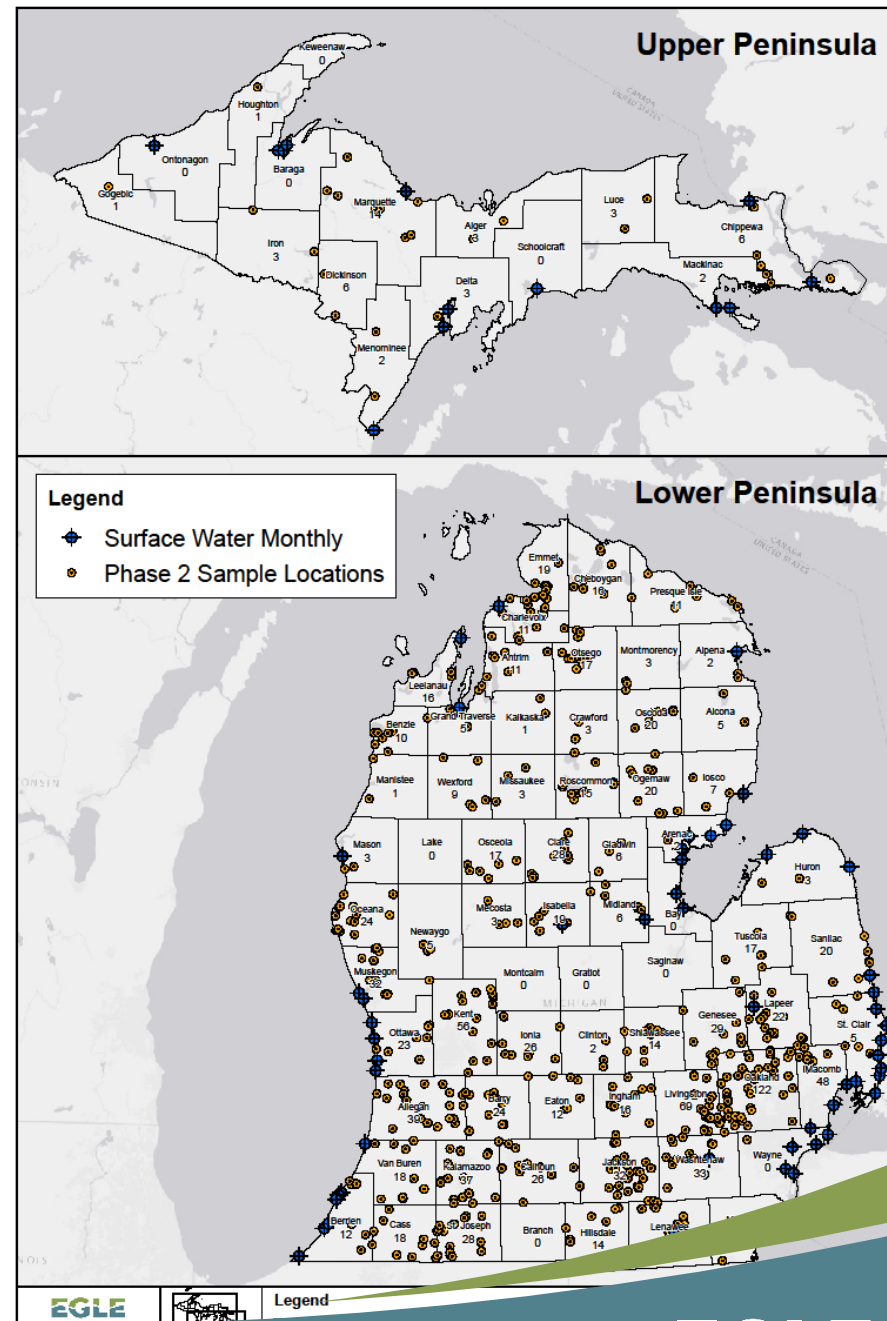


ID	TYPE	LOCATION
1	School	ALTO ELEMENTARY SCHOOL
2	School	GULL LAKE SCHOOLS-40TH ST EARLY LEARNING CTR
3	School	CADDOIN WINTER SCHOOL DIST.
4	School	RETHE PUPPET/TWIN LAKE ELEMEN
5	School	GLENGARY ELEMENTARY/WLS
6	School	EIGHT CAP IONIA CO. OUTREACH
7	School	CHANDLER SCHOOLS-TECHNICAL CAMPUS NW
8	School	TRI COUNTY JUNIOR HIGH
9	School	CENTRAL MONTICMEL SCHOOLS
10	School	ROCKFORD EAST MIDDLE SCHOOL
11	School	EMERSON SCHOOL- ELEMENTARY
12	School	BOYNE FALLS PUBLIC SCHOOL
13	School	LELAND PUBLIC SCHOOL DISTRICT 2
14	School	CHEPPEN WILLS HIGH SCHOOL
15	School	ROBINSON ELEMENTARY SCHOOL
16	School	BAKER COLLEGE OF CADILLAC
17	School	C.O.D. SCHOOL
18	School	STANDISH-STERLING CENTRAL ELEMENTARY
19	School	WHITTEMORE/PRESOTT SCHOOL COMPLEX
20	School	WALKERVILLE ELEMENTARY
21	Daycare	LOOKING HEADS/LITTLE HANDS
22	Daycare	ALL FOR KIDS
23	Daycare	FUTURE STEPS LEARNING CENTER LLC
24	Daycare	CHAPMAN MEMORIAL COLLEGE
25	Daycare	KIDS TIME DAY CARE CENTER
26	Daycare	THE HOP CHILD CARE CENTER
27	Daycare	IVYCAP INC. (IPW)
28	Daycare	MARCA HARRISON PRESCHOOL
GROUP 2		
ID	TYPE	LOCATION
29	Municipal	SPRING VALLEY MOBILE HOME PARK
30	Municipal	ANDREWS MOBILE HOME PARK
31	Municipal	WHISPERING PINES
32	Municipal	ARLINGTON WOODS
33	Municipal	EGG CREEK MOBILE HOME PARK
34	Municipal	HERITAGE APARTMENTS
35	Municipal	WALLOON LAKE WATER SYSTEM
36	Municipal	CROCKETT MOBILE HOME PARK
37	Municipal	TALLMADGE MEADOWS
38	Municipal	PORT OF CALL - WEST
39	Municipal	EVERGREEN MOBILE HOME COMMUNITY
40	Municipal	LONG LAKE MOBILE HOME ESTATE
41	Municipal	COUNTRYSIDE MOBILE COURT
42	Municipal	MAINS STREET APARTMENTS
43	Municipal	OAK LEAF MANOR
44	Municipal	HERITAGE HILLS MOBILE HOME VILLAGE
45	Municipal	WHISPERING WOODS-WHITE PINE RIDGE OSOOD
46	Municipal	GREENLAWN MOBILE HOME COURT
GROUP 3		
ID	TYPE	LOCATION
47	Municipal	ALBION
48	Municipal	ANN ARBOR
49	Municipal	BALDWIN, VILLAGE OF
50	Municipal	CLARE, CITY OF
51	Municipal	EVART, CITY OF
52	Municipal	HESTERA
53	Municipal	INDEPENDENCE TWP
54	Municipal	KALAMAZOO
55	Municipal	KINROSS TWP
56	Municipal	KI SAWYER
57	Municipal	NORTHPORT, VILLAGE OF
58	Municipal	OTSEGO
59	Municipal	PLAINFIELD TWP
60	Municipal	RAINWELL
61	Municipal	PORTAGE
62	Municipal	SAND WHITNEY UTILITIES AUTHORITY
63	Municipal	UNION TWP

# Monthly Monitoring

Monthly sampling of Community Water Supplies utilizing a surface water source

- 72 supplies
- Addresses potential for variability in surface water samples
- These supplies serve approximately 5.5 million Michigan residents
- Majority of these supplies use the Great Lakes as a source
- Monthly Monitoring led to detections of PFAS in River Raisin, July 2019



# Statewide Survey: Phase II (2019)

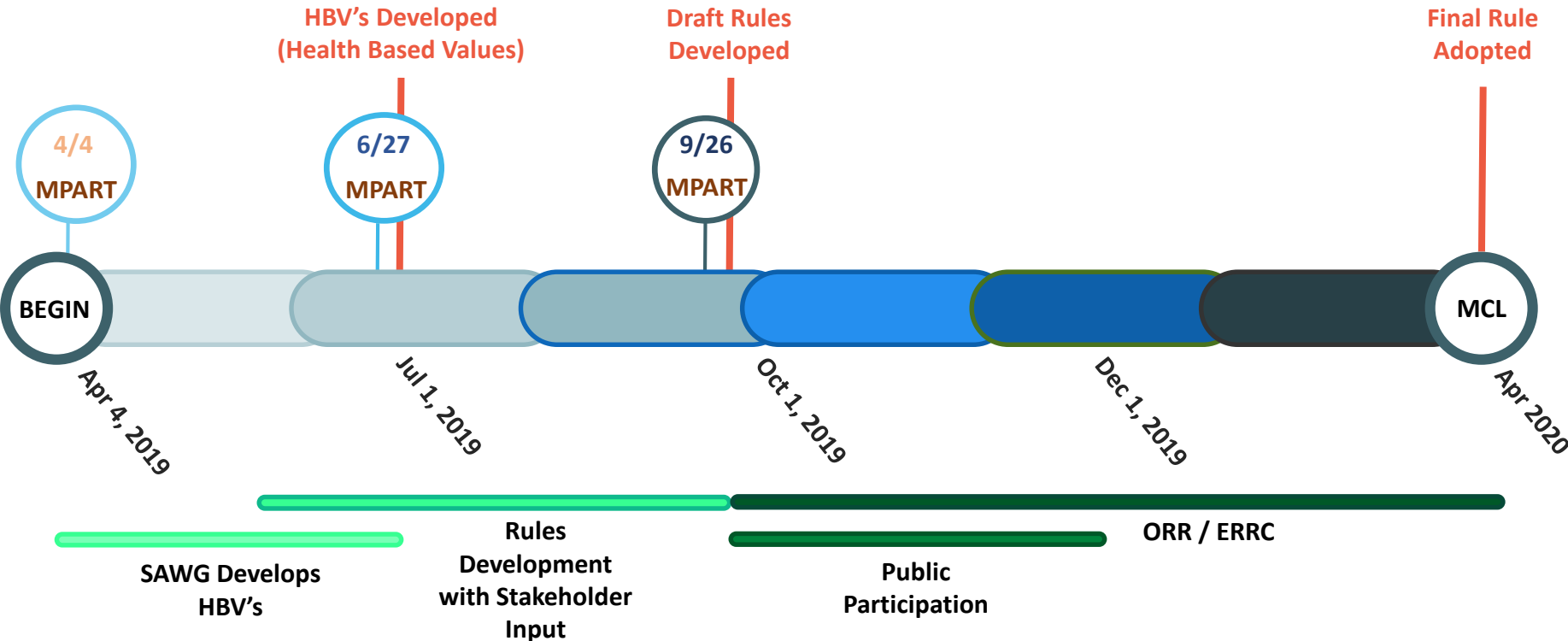
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Approximately 800 additional Type II noncommunity public water supplies

- Based on recommendations from Drinking Water and Environmental Health Division noncommunity staff
- Includes systems to address sensitive populations
  - Adult Foster Care Providers
  - Medical Care Providers
  - Children's Camps
- Includes systems to address non-transient consumers (employees)
  - Industry
  - Offices
  - Motels/Resorts



# Update on the Maximum Contaminant Level (MCL) Process





Michigan Department of  
**Environment, Great Lakes, and Energy**