



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

PFAS Testing in Michigan's Public Drinking Water

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Drinking Water and Environmental Health Division



PFAS RESPONSE

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

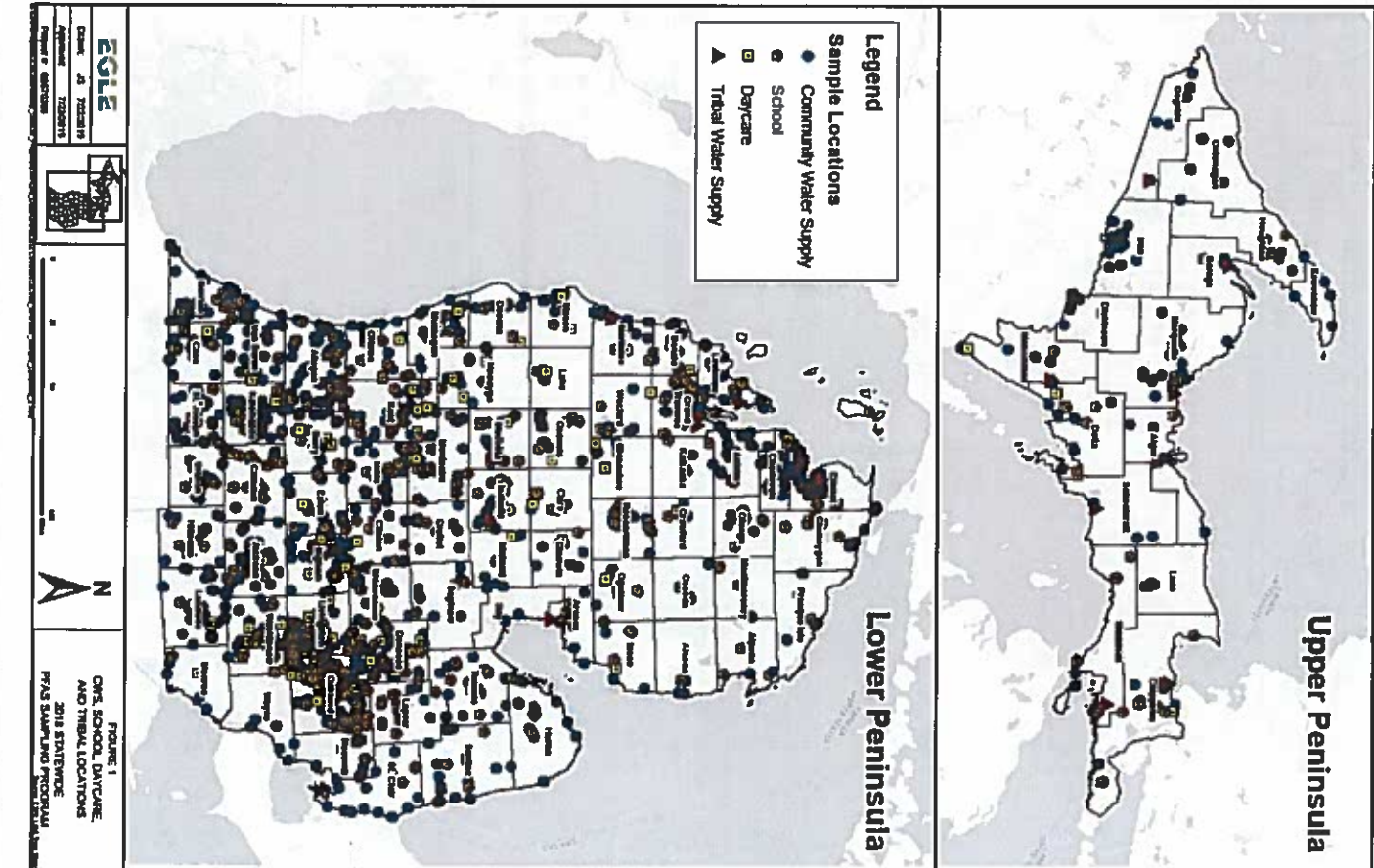
Per- and polyfluoroalkyl substances (PFAS) are a large group of man-made chemicals that include perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). PFAS have been used globally during the past century in manufacturing, firefighting and thousands of common household and other consumer 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



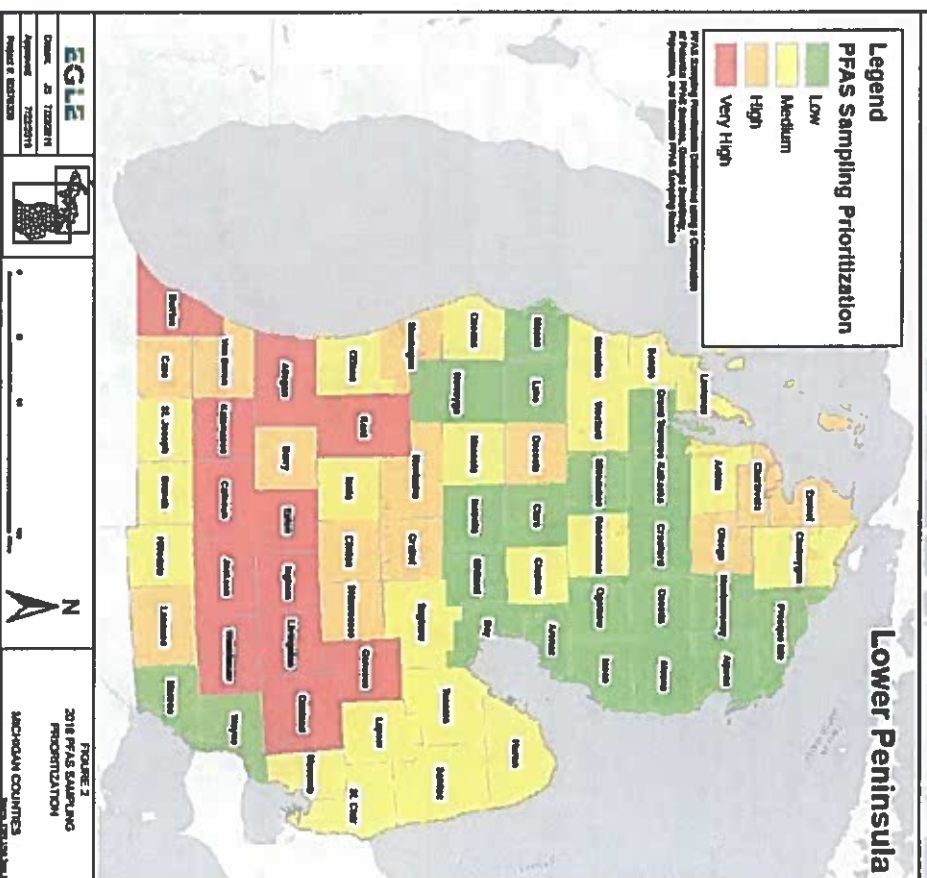
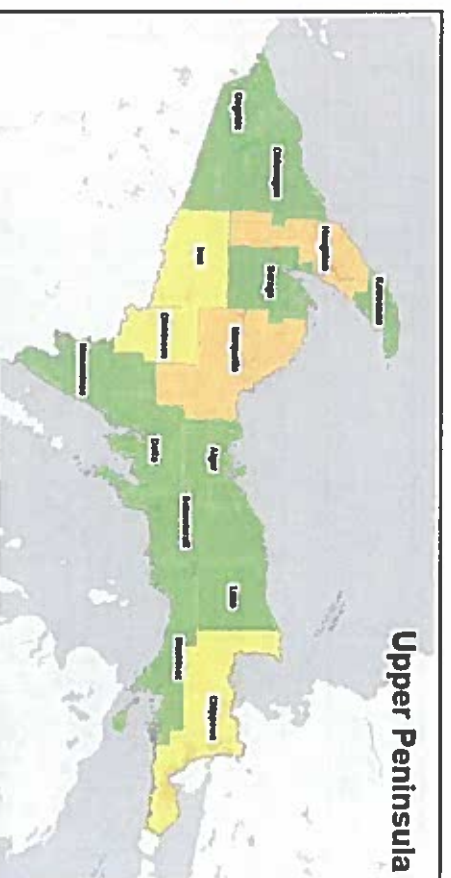
Phase I (2018)

- 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.



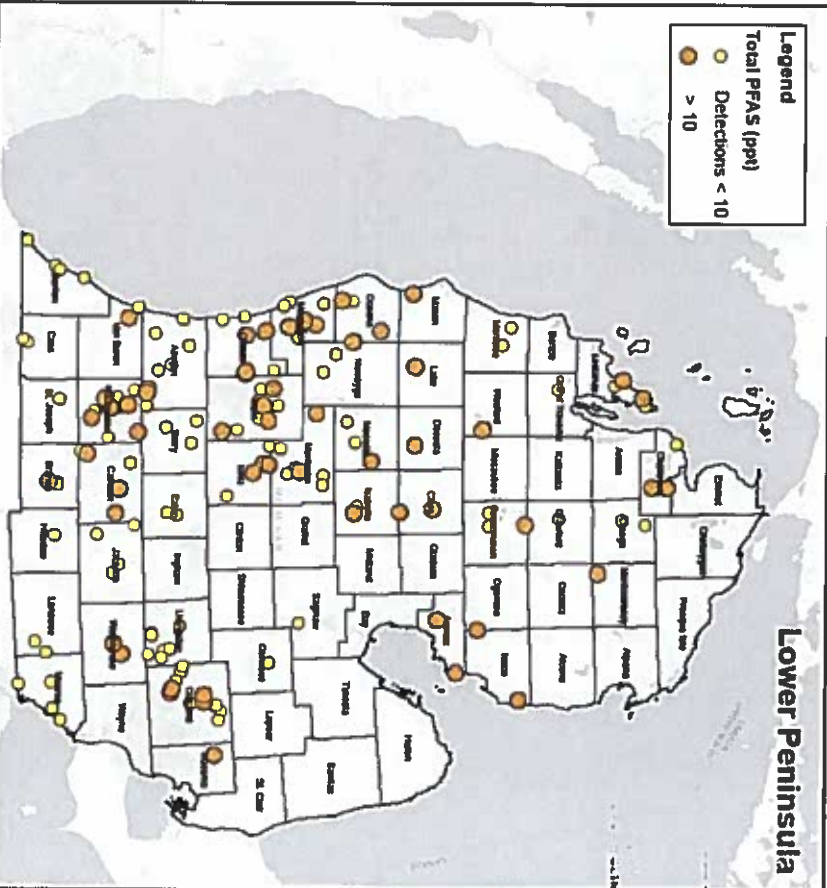
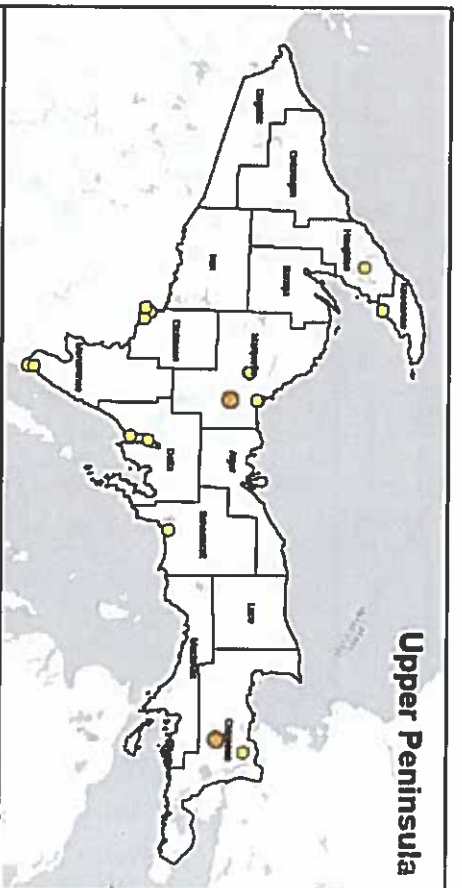
Phase I (2018)

- 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 ≥ 10 ppt for at least one PFAS analyte
- US EPA Lifetime Health Advisory exceedance at Parchment, Michigan and Robinson Elementary (> 70 ppt PFOA + PFOS)



EGLE
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POURING AN TOTAL PFAS DETECTIONS HEAT MAP
 2018 STATEWIDE PFAS SURVEILLANCE PROGRAM
 MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

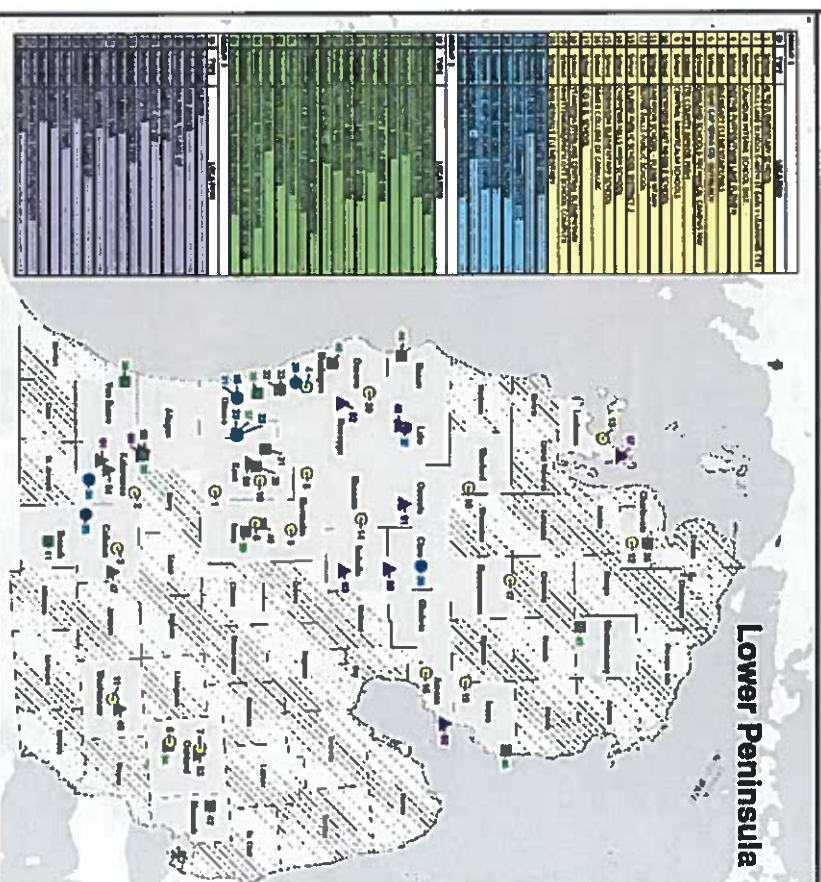
Michigan Counties

0 10 20 30 40 50 Miles

Quarterly Monitoring

Public Water Supplies with results ≥ 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



EGLE
 Director: 28 FEBRUARY 2018
 Approved: 28 FEBRUARY 2018
 Prepared: 28 FEBRUARY 2018

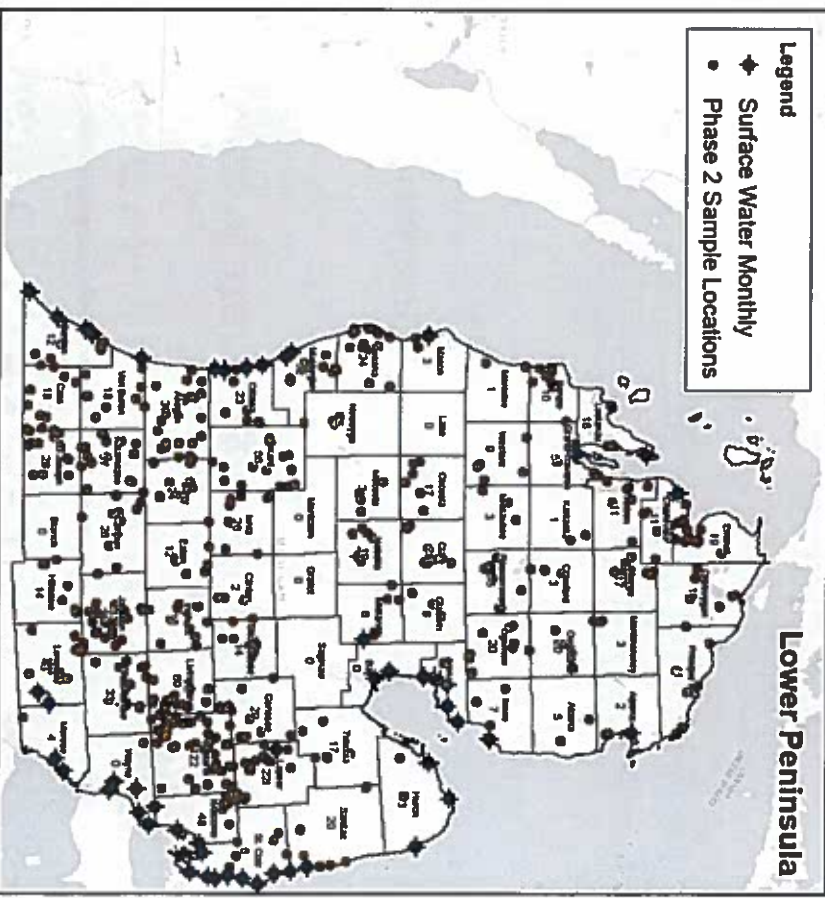
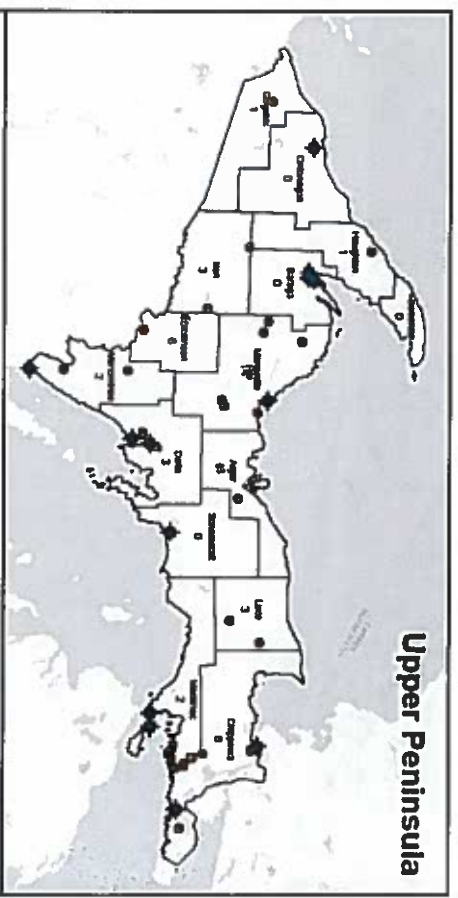
FIGURE 21
 CWS QUARTERLY SAMPLING
 2019 STATISTICS
 PFAS SAMPLING PROGRAM

Legend
 Group 1: Groundwater
 Group 2: Surface Water
 Group 3: Community Water Supply (CWS)
 Group 4: Municipal Water Supply

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



EGLE
 DIVISION OF ENVIRONMENTAL QUALITY
 2019 STATEWIDE PFAS SAMPLING PROGRAM

DATE: 07/2020
 APPROVED: 7/20/20
 PREPARED BY: AUSTIN

Legend
 Michigan Counties (County Name, Phase 1 Sample Count)
 Michigan Counties (County Name, Phase 2 Sample Count)

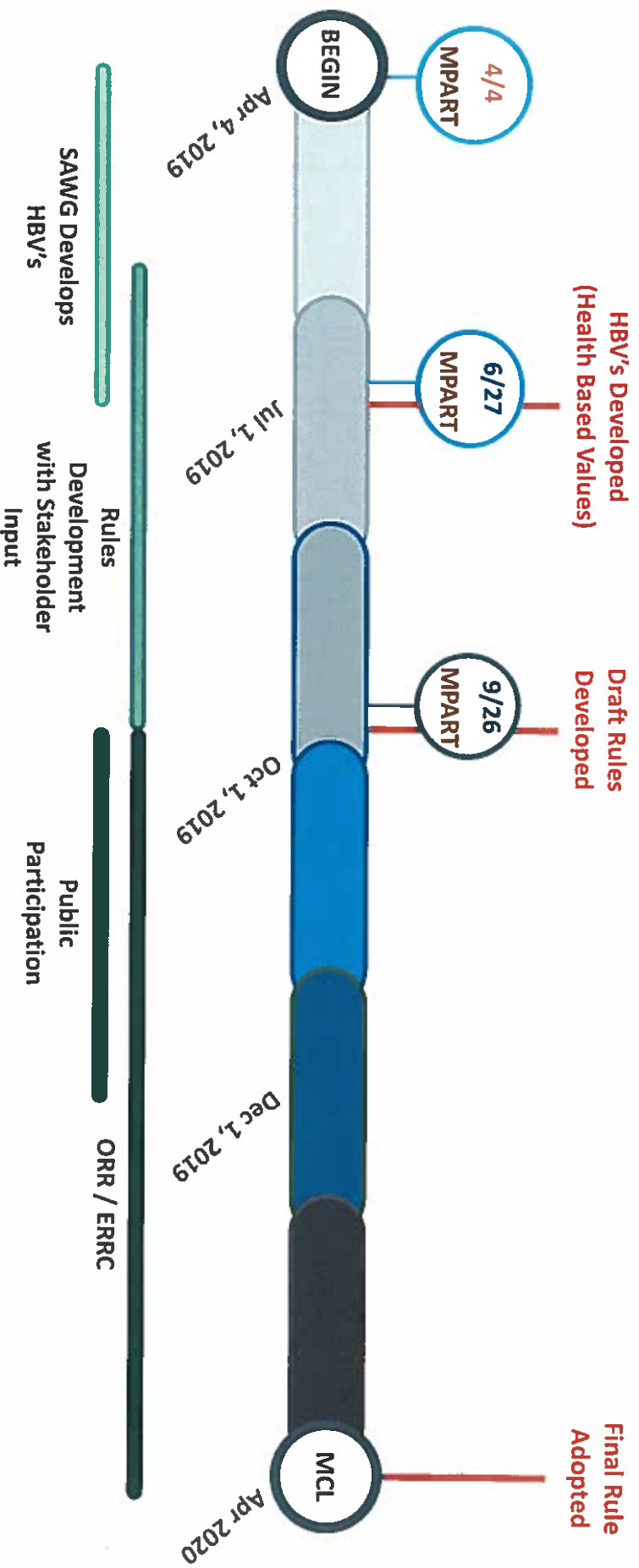
PHASE 2 AND MONTHLY SAMPLING
 2019 STATEWIDE
 PFAS SAMPLING PROGRAM

Statewide Survey: Phase II (2019)

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

