
Upcoming PFAS Studies:

Michigan PFAS Exposure and Health Study (MiPEHS)

ATSDR Multi-site Health Study (ATSDR MSS)

*CITY OF PARCMENT, COOPER TOWNSHIP, AND
NORTH KENT COUNTY*

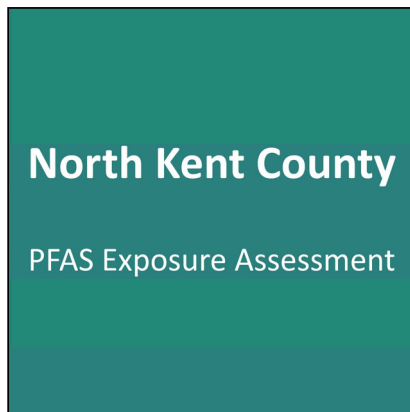
Wolverine CAG Meeting, 05.21.2020 | Do Not Cite

Preface

- All information provided here is current as of May 21, 2020
- Timelines and scope could change with the evolving response to COVID-19

Upcoming PFAS Research

Exposure Assessment



2 Health Studies

1. MiPEHS

**Michigan PFAS
Exposure and
Health Study
(MiPEHS)**

City of Parchment,
Cooper Township, and
North Kent County

2. ATSDR MSS



Preliminary reports are being drafted
and data informed key decisions

MiPEHS and MSS

MDHHS Research Team



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**Laura Abington,
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**Ellery Johnson,
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Partners

Science Advisory Panel (EHRSG)

- Review the scientific relevance and contribution to public health

Stakeholder Groups

- One per site
- ≈10 people per group
- Involvement of the community in study recruitment and logistics



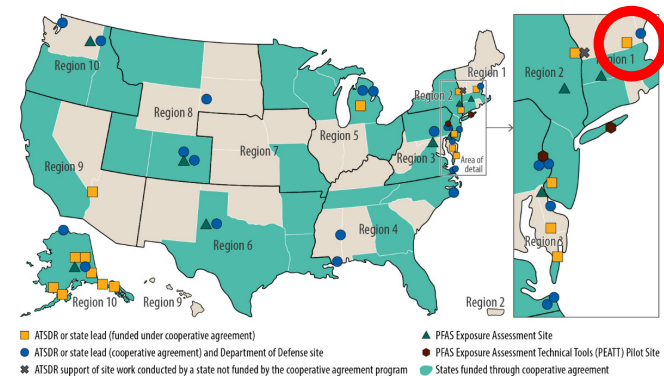
**CDC/ATSDR
(MSS only)**

Studies are part of a larger design

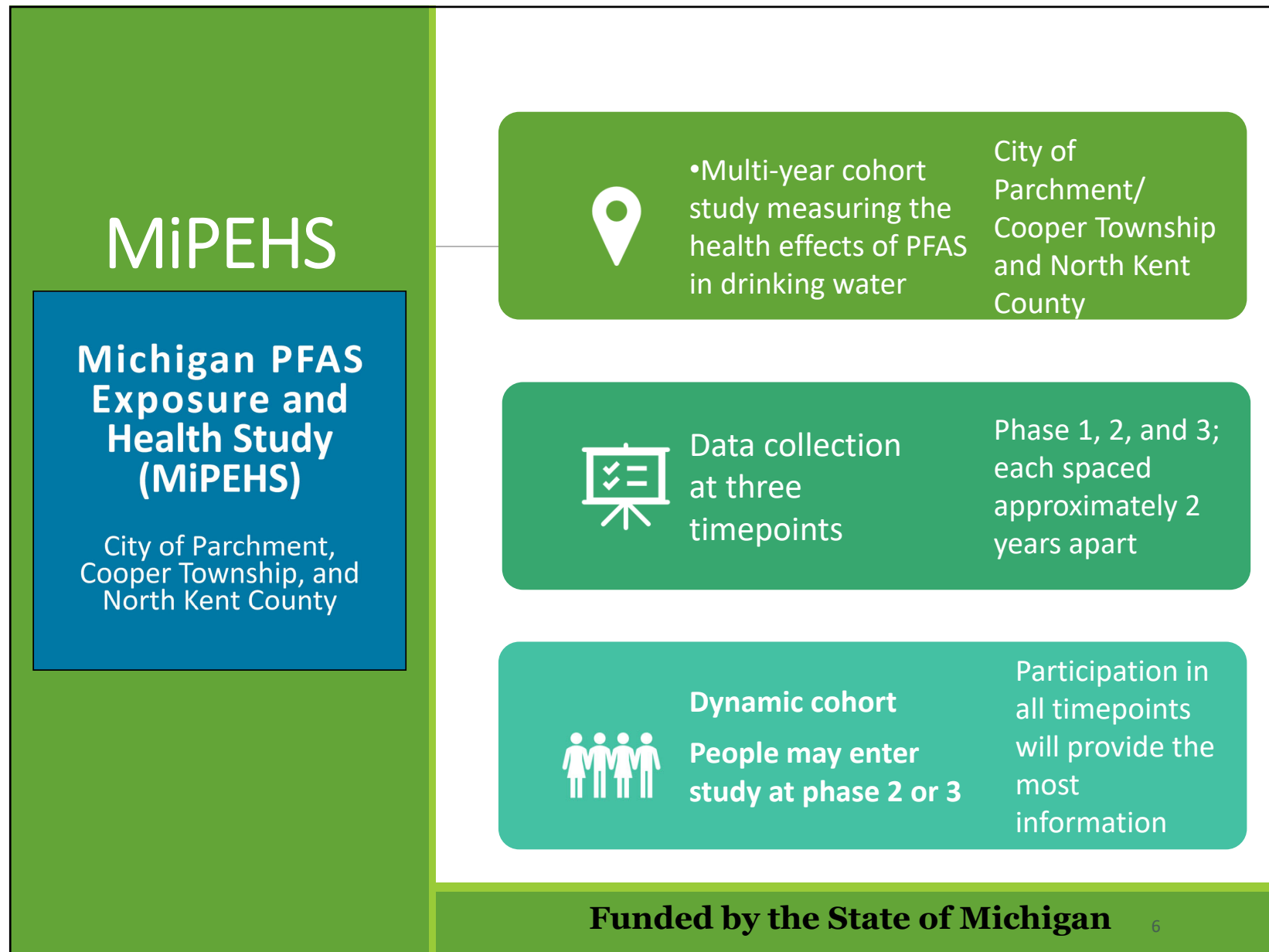
- Both studies are designed to mimic as much as possible current ATSDR Health studies (PEASE TRADEPORT) in the field.

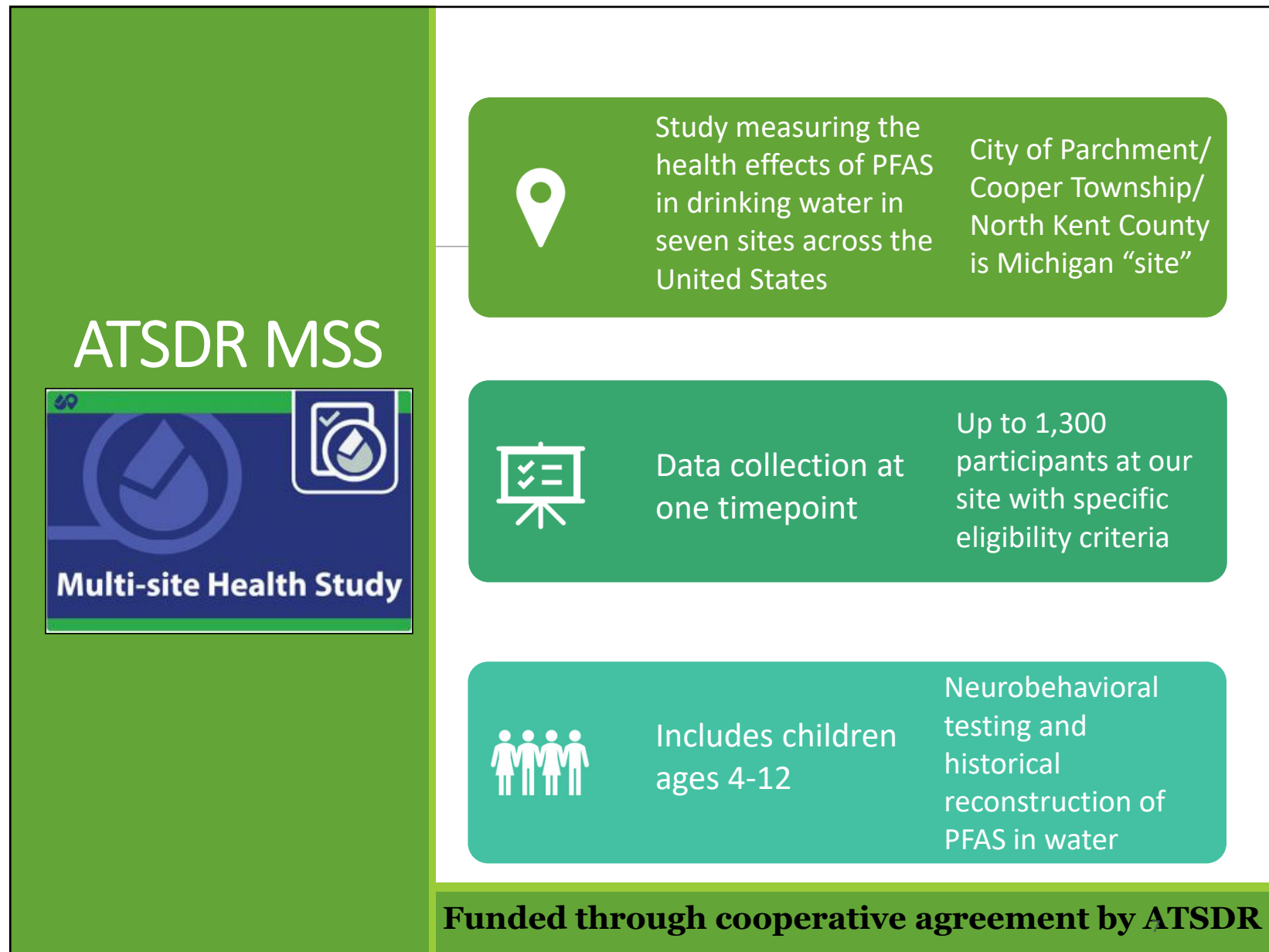


- Benefit is comparability to other studies and more robust conclusions on PFAS and Health



<https://www.atsdr.cdc.gov/pfas/index.html>

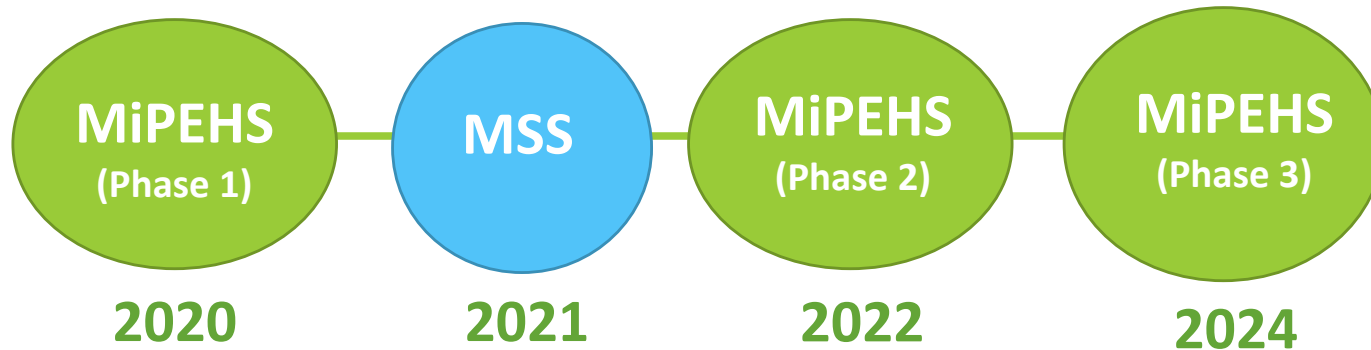




Data and sample collection for MiPEHS and MSS

Michigan PFAS
Exposure and
Health Study
(MiPEHS)

City of Parchment,
Cooper Township, and
North Kent County



*Anticipated timeline, will depend on the ongoing COVID-19 pandemic response efforts

The study team is working to minimize confusion with having two similar yet separate studies in the field!

Why 2 studies?

Michigan PFAS
Exposure and
Health Study
(MiPEHS)

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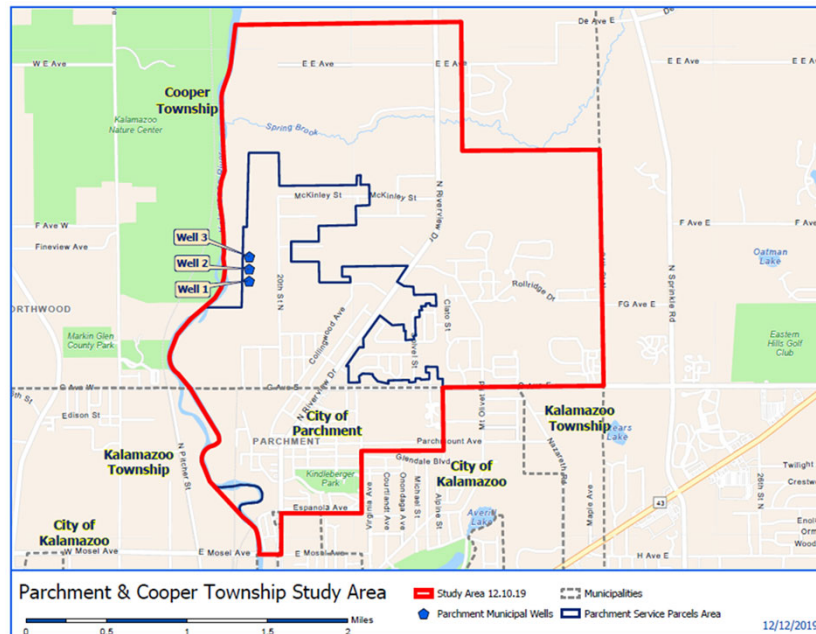
- The two studies have **different designs, goals, and advantages** to address unique knowledge gaps on PFAS in drinking water, serum PFAS levels, and health outcomes
- MiPEHS
 - A design advantage of measuring changes over time – both in exposure and outcomes
 - Incorporates study objectives that ATSDR does not include, such as PFAS's relationship to birth outcomes and how some PFAS that are not often studied leave the body
 - As a Michigan-only study, we can start earlier and incorporate unique design elements that ATSDR does not
- MSS
 - An advantage in measuring outcomes among differing US populations
 - Added benefit of larger sample size (with data pooling) to measure relationships with outcomes that can't be measured at the local level – increased sample size

1. MiPEHS Eligible Participants

Michigan PFAS Exposure and Health Study (MiPEHS)

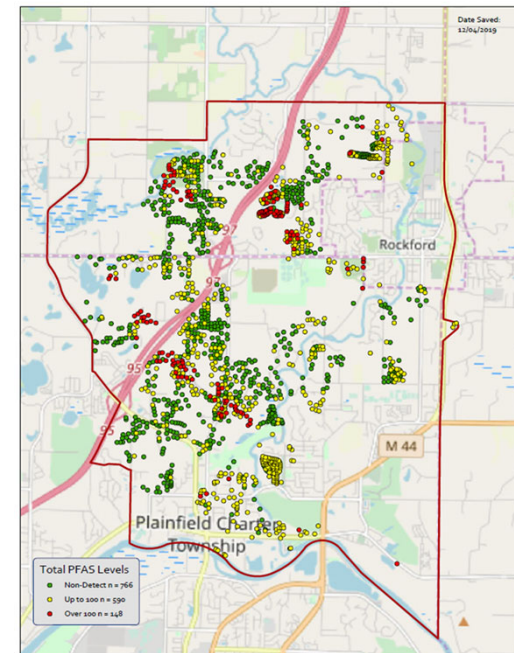
City of Parchment,
Cooper Township, and
North Kent County

City of Parchment and Cooper Township



≈2500 households

North Kent County



≈1700 households

Eligible participants must have primary drinking water source in the area before 2018

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1. MiPEHS Data and Sample Collection Process



Michigan PFAS
Exposure and
Health Study
(MiPEHS)

City of Parchment,
Cooper Township, and
North Kent County

- Two research offices will be set up, **one in each study area**, and operated by RTI
 - Informed consent documents be obtained
 - Complete a survey
 - Blood samples will be collected by a trained phlebotomist
- Water samples collection by MDHHS sanitarians (**MiPEHS only**)
 - Collected from North Kent and Cooper township private wells and a subset of Parchment municipal supply participants
 - Pre- and post-filter water sampling

**Michigan PFAS
Exposure and
Health Study
(MiPEHS)**City of Parchment,
Cooper Township, and
North Kent County

1. MiPEHS Data and Samples

- Data and samples to be collected
 - Venous blood samples
 - Capillary blood spot on a card
 - Information by survey
 - Household water samples
 - Existing newborn blood spots acquired from Michigan BioTrust
- Laboratory testing
 - Serum PFAS, 39 analytes – the primary exposure of interest
 - Water PFAS, 39 analytes – the primary PFAS exposure source of interest
 - Serum PCBs – to be tested as a potential factor related to health outcomes
 - Dozens of biomarkers of health outcomes

2. Multi-site Health Study Data and Samples



- Data and samples to be collected
 - Venous blood samples
 - Urine samples
 - Information by survey
 - Medical record abstraction
 - School record abstraction
 - Neurobehavioral testing (children 4-17 only)
- Laboratory testing – to be conducted by the CDC lab
 - Serum PFAS, 8 analytes
 - Urine PFAS, 8 analytes
 - Dozens of biomarkers of health outcomes

What health outcomes will be measured in MiPEHS and MSS?

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Disease Diagnoses

- Musculoskeletal
 - Osteoarthritis
 - Osteopenia and osteoporosis
- Cardiovascular Diseases
 - Hypertension
- Pregnancy and reproduction
 - Endometriosis
 - Pregnancy-induced hypertension
 - Preeclampsia
 - Infertility
- Respiratory diseases
 - Asthma
- Immune function
 - Autoimmune diseases
 - Atopic dermatitis/eczema
 - Allergies
- Diabetes (including gestational diabetes)
- Kidney disease
- Liver diseases

MiPEHS: Plus survey
MSS: Plus survey and
medical record
abstraction

**Information on PFAS and cancer is not an
outcome (due to low N) for either study**

Project Status

Michigan PFAS Exposure and Health Study (MiPEHS)

City of Parchment,
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1. MDHHS MiPEHS

- Planning for MiPEHS began in July 2019
 - Weekly internal team meetings for research logistics, data management, laboratory coordination
 - Weekly meetings with RTI
- Research protocol under management and IRB review
 - Work cannot start due to COVID-19
- Monthly community stakeholder meetings in both locations for input on study logistics and outreach
- Recruitment and clinics 17 weeks after MDHHS IRB approval to start work

Project Status



2. Multi-site Health Study

- Work started on October 1, 2019
 - Weekly internal team meetings for research logistics, data management, laboratory coordination
 - Monthly “1:1” and “All PIs” calls with ATSDR
- Year 1 focus is on planning and historical reconstruction/PBPK modeling
- Monthly community stakeholder meetings in both locations
- Recruitment and clinics planned to start **budget year 2 (2020-2021)**

COVID-19

- Impacts of COVID-19
 - Timing
 - Health and safety
 - Additional measures to safeguard public health
- Working closely with DEH and DHHS team, other state agencies, CDC

Information about COVID-19 can be found at michigan.gov/coronavirus

Thank you
