

# **Environmental Health Tracking and Biomonitoring Advisory Panel Meeting February 14, 2023**

**1:00 P.M. – 4:00 P.M.**

*Via Microsoft Teams*

Environmental Health Tracking and Biomonitoring Advisory Panel Meeting  
February 14, 2023

Minnesota Department of Health  
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*Upon request, this material will be made available in an alternative format such as large print, Braille or audio recording. Printed on recycled paper.*

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## Agenda Overview

**Date: 2/14/2023**

### Welcome & Agenda

**1:00 p.m.**

Chair Lisa Yost will welcome attendees to the meeting. Panel members are invited to introduce themselves. Lisa will give an agenda overview.

### Legislative Update

**1:10 p.m.**

MDH Environmental Health Division Director Tom Hogan will give a brief update on the current legislative session. Panel members are invited to ask questions.

### Human Health Exposure Analysis Resource (HHEAR): Overview and Work in Minnesota

**1:20 p.m.**

University of Minnesota Division of Environmental Health Sciences Professor Lisa Peterson will present an overview of the HHEAR program, work being done in Minnesota, and opportunities for collaboration. Panel members are invited to ask questions.

**1:50 p.m. Discussion and questions**

### Skin Lightening Products and Urine Mercury Testing: Recommendations for Future Work

**2:20 p.m.**

Erin Batdorff, a physician who recently completed a fellowship in Medical Toxicology training at Region's Hospital and the Minnesota Poison Control System, will share lessons learned from her work on urine mercury testing and response, and offer recommendations for future work in this area. Panel members are invited to ask questions.

**3:00 p.m. Discussion**

#### Questions for the Panel

- Which recommendations from Dr. Batdorff should we prioritize for the work of our program, both in the short-term and as a long-term vision?
- Our efforts on urine mercury testing and response are a collaborative effort between MDH, MPCA, Poison Control, and clinics. What is the panel's feedback on how we can all work together most effectively?

- What are the panel's suggestions about best strategies to engage health care providers on the issue and encourage them to identify patients who may be at risk of exposure?

## Minnesota Tracking Update and MDH Data Vision Project

**3:30 p.m.**

MDH Environmental Epidemiology Unit Supervisor Jessie Carr will share updates from the Minnesota Tracking Program and give an overview of the MDH Data Vision Project. Panel members are invited to ask questions.

## Public Comments, Audience Questions, New Business

**3:50 p.m.**

## Motion to Adjourn

**4:00 p.m.**

## Human Health Exposure Analysis Resource (HHEAR): Overview and Work in Minnesota

### Speaker Biosketch

**Lisa Peterson, PhD, Professor, University of Minnesota**, received her B.S. in chemistry at Macalester College, St. Paul, Minnesota. She earned her Ph.D. in Pharmaceutical Chemistry at the University of California at San Francisco. After post-doctoral studies at Vanderbilt University in the Center in Molecular Toxicology, she joined the Division of Chemical Carcinogenesis at the American Health Foundation in Valhalla, New York. In 1997, Lisa moved to the University of Minnesota where she is now a professor in the Division of Environmental Health Sciences and co-program leader of the Carcinogenesis and Chemoprevention Program in the Masonic Cancer Center. Her research focuses on mechanisms by which chemicals initiate carcinogenesis. Currently, she is investigating interactions between tobacco smoke chemicals in established rodent tumor models. In addition, she is principal investigator of the Minnesota HHEAR Targeted Analysis Lab in the Human Health Exposure Assessment Resource funded by the National Institute of Environmental Health Sciences. Lisa has been an active member of the Division of Chemical Toxicology, American Chemical Society since its inception, serving as chair of the Bylaws Committee (1997-1998), councilor (2002-2004), chair (chair-elect, 2008; chair 2009-2010; immediate past chair, 2011-2012), and member of the nominations committee (2014-2015, chair 2016). She has also served as treasurer for the International Society for the Study of Xenobiotics. She was an associate editor for *Chemical Research in Toxicology* from 2013-2017.

### Background on HHEAR

A 1-page brochure about the program is included as the following page. The program's web site, [Human Health Exposure Analysis Resource \(HHEAR\) \(hhearprogram.org\)](http://hhearprogram.org), also has more information.



## What is HHEAR?

The Human Health Exposure Analysis Resource (HHEAR) is a centralized network of exposure analysis services and expertise available to eligible researchers who want to add or expand exposure analysis to their studies of human health. There is no cost to the investigator.

HHEAR was established to:

- ✓ Advance understanding of the impact of environmental exposures on human health throughout the life course.
- ✓ Promote characterization of the totality of human environmental exposures called the exposome.

HHEAR is a partnership spanning the National Institutes of Health (NIH), funded by the National Institute of Environmental Health Sciences; the National Cancer Institute; the National Heart, Lung, and Blood Institute; and the NIH Environmental Influences on Child Health Outcomes Program.



## What HHEAR Offers

HHEAR provides researchers access to high-quality exposure-assessment services, including:

- ✓ Expert consultation on exposure analysis, study design and data analysis for development of applications, provided by the HHEAR Exposure Assessment Network (Lab Hubs) and Data Repository, Analysis, and Science Center (Data Center);
- ✓ State-of-the-art laboratory analysis: targeted (hypothesis driven) and untargeted (discovery driven) analysis of biological and environmental samples for approved projects;
- ✓ Statistical analysis, data integration, and interpretation, upon request, for approved projects;
- ✓ A repository of de-identified epidemiologic and biomarker data for approved projects to promote secondary analysis of pooled environmental health data. Researchers may search and browse HHEAR studies and harmonized data, as well as compile and download customized data.



## Who Should Apply?

The HHEAR program prioritizes applications that extend the environmental exposure analyses of a parent grant and support the harmonization of data generated across studies in the HHEAR public data repository. **You may be eligible to apply** for HHEAR services if you have human biological and/or environmental samples and related health outcome data for an ongoing or completed epidemiological or clinical study that is/was funded by one of the HHEAR funding agency programs. You must also agree to comply with HHEAR policies as indicated in the **HHEAR Policies for Access to Services**.

### *Before you apply...*

If you are interested in adding exposure analyses to your study, contact us at **HHEARHelp@westat.com** before you apply. The Coordinating Center will answer questions on eligibility and set up calls with Lab Hub and Data Center scientists, who will provide consultation services on the feasibility of your study design, exposure analyses, biological and environmental samples and data analysis plan.



# Skin Lightening Products and Urine Mercury Testing: Recommendations for Future Work

## Speaker Biosketch

**Dr. Erin Batdorff** graduated from the University of Toledo College of Medicine in 2017 and then completed her residency in Internal Medicine at the University of Minnesota. During her residency, she also completed the Global Health course with a particular interest in working with underserved populations. After residency, she completed a fellowship in Medical Toxicology training at Region's Hospital and the Minnesota Poison Control System (Poison Control). During her fellowship, she worked extensively with various cases of mercury toxicity with a primary interest in inorganic mercury toxicity originating from skin care products. Currently she is working as a Hospitalist at the Southern Arizona VA Medical Center.

## Background on Presentation

The MDH Biomonitoring Program has worked on the issue of urine mercury testing and skin lightening products for a number of years, receiving helpful guidance from the Advisory Panel along the way.

- Our work began with the 2016-2018 MDH [MN FEET study](#) that found that women in the study from some Minnesota communities had elevated urine mercury exposures as a result of using skin lightening products. In MN FEET, we first offered a voluntary home visit to participants with elevated urine mercury in coordination with the Minnesota Pollution Control Agency (MPCA) and local public health partners.
- We followed up on MN FEET with three clinic-based urine mercury screening projects led by University of Minnesota Doctor of Nursing Practice students. These projects took place at different community clinics serving populations MN FEET found to be at higher risk for the use of skin lightening products and inorganic mercury exposure. The screenings found additional cases of elevated urine mercury and again offered a voluntary home visit and urine re-testing advice to reduce exposures. The projects also assessed the effectiveness and process changes needed to routinely screen clinical patients for urine mercury.

As a result of the COVID-19 response and subsequent staff capacity limitations, our recent work in this area has been more limited. We work as part of a collaborative team to respond to elevated urine mercury cases that are brought to MDH by health care providers, Minnesota Poison Control, or others. We coordinate urine testing by our MDH Public Health Laboratory, a home visit response in partnership with the MPCA and other organizations including Minnesota Poison Control and local public health, and guidance for interpreting urine mercury test results. We are also measuring urine mercury in all children who participate in our Healthy Kids Minnesota program and, so far, have responded to one elevated case in a child.

As our staff capacity is increasing and we look ahead to expanding our work in urine mercury testing and its public health follow-up, we want to do so in a way that is effective and sustainable. We want to build on the strengths of our past biomonitoring projects and partnerships. We want our biomonitoring efforts to be aligned with and supportive of the other essential pieces of responding to the larger issue of mercury in skin lightening products,



including community engagement, product testing, and working with local businesses to remove products from their shelves.

In this presentation, Dr. Erin Batdorff will share lessons learned from her work on urine mercury testing and response and will offer recommendations for future work in this area. As part of her Medical Toxicology Fellowship at Poison Control, Dr. Batdorff completed a rotation with MDH on mercury and skin lightening products, physician outreach, and elevated case systems improvement. She worked with MDH and MPCA on the home visit response for a number of elevated cases, speaking with the individuals about possible exposures and health outcomes and collecting additional urine samples from people in the home (including children). She was also featured by CNN in the recent article [Mercury in beauty creams believed to have caused vision loss in woman](#) (also see citation on page 13 below).

## Questions for Advisory Panel

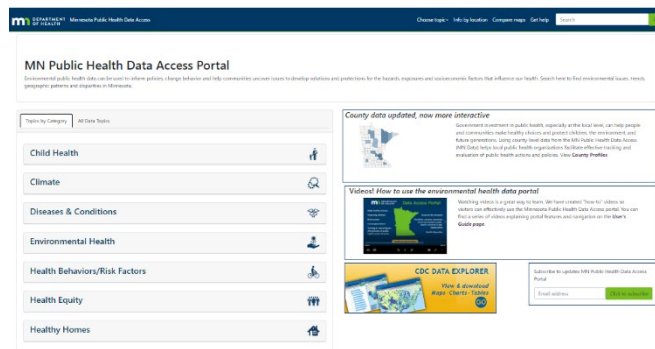
- Which recommendations from Dr. Batdorff should we prioritize for the work of our program, both in the short-term and as a long-term vision?
- Our efforts on urine mercury testing and response are a collaborative effort between MDH, MPCA, Minnesota Poison Control, and clinics. What is the panel's feedback on how we can all work together most effectively?
- What are the panel's suggestions about best strategies to engage health care providers on the issue and encourage them to identify patients who may be at risk of exposure?

# Minnesota Tracking Update and MDH Data Vision Project

## MN Public Health Data Access Portal content updates

### Asthma

County Profiles – MDH collects data on key indicators for public health and environmental categories across Minnesota counties. The dashboard can be used to view information about these indicators by county. Analyze the data can be downloaded and analyzed by the user. A link is provided at the top of the page to download the raw data. Developed in Tableau, county profiles are more interactive for a better user experience.



### Home page visual improvements

## MDH Data Vision Project

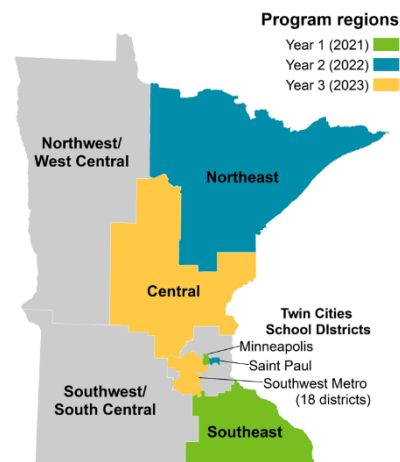
Over the last two years MDH has heard from staff, local and Tribal public health partners, communities and community organizations, and other leaders about the need for a more responsive, collaborative, and equitable approach to data collected, used, and shared. Recognizing the opportunity to make progress on deeper issues, to build on what we've learned from the COVID-19 response, and to incorporate long-standing feedback into vision for data within MDH, a small group from the MDH IT Data Strategy Team drafted an initial framework that provided a starting point for discussion. It focused on four main areas: (1) data standards, (2) data analysis, (3) communications, and (4) interoperability. An emphasis on equity and partnerships were woven throughout these focus areas.

**The goal of the Data Vision and Roadmap project is to get broad input to refine and finalize a data vision for MDH going forward and to co-create a roadmap for how MDH will achieve that vision.** Achievement of the vision is going to take time but will ultimately lead to MDH being a more trusted partner for gathering, using, managing, and sharing data in ways that advance health equity in Minnesota and help MDH achieve its strategic goals. In this project we will humbly ask questions about why past recommendations and equity initiatives faltered and will use those insights to inform a roadmap forward with ongoing partner involvement. In this project, we are taking a participatory, staff-driven approach to create a vision roadmap that will be sustainable, flexible and provide accountability for changes and priorities identified through the process. An Advisory Committee of diverse MDH staff, community members, and partners has refined that data vision and is leading a dialogue process to gather feedback from Local Public Health, Tribal Nations, communities, healthcare, research and academic partners, and MDH staff. MDH will rely on the data vision and roadmap created through this project to help guide critical transformations and priorities for work practices, systems, and accountability into the future.

# Minnesota Biomonitoring Updates

## Healthy Kids Minnesota Program Update

Healthy Kids Minnesota is a U.S. Centers for Disease Control and Prevention (CDC) funded program partnering with Early Childhood Screening (ECS) programs at local public health agencies and school districts to recruit preschool-age children for environmental chemical exposure screening. The 5-year program will rotate in five regions in the state (see map), focusing on one non-Metro and one Metro region per year. Our goal is to reach 250 – 300 children per community in each program cycle.



The second program cycle – Healthy Kids Minnesota 2022 – launched in August 2022 and includes Northeast Minnesota and St. Paul. Despite delays in implementation discussed below, a total of 104 participants have been recruited.

The MDH Public Health Lab (PHL) has completed analyses for pesticides and is currently finalizing the environmental phenols analysis for Healthy Kids Minnesota 2021 participants. Plans are underway for the second results mailing of pesticides and environmental phenols results to families.

## Healthy Kids Minnesota 2022 Updates

Table 1 describes where each of our Healthy Kids Minnesota 2022 partners stand in the partnership and recruitment process.

**Table 1: Healthy Kids Minnesota 2022 Partnership Progress**

HKMN 2022 Partners	Financial Contract	Staff Trained	Target number	Recruitment Started	Total Number Recruited/Samples
Cloquet Public Schools/Carlton County	Complete	Yes	60	Yes	35/33
Cook County Public Schools/Cook County	Complete	Yes	40	Yes	15/13
St. Paul Public Schools	Complete	Yes	300	Yes	50/46
Duluth Public Schools/St. Louis County	Submitted	No	150	No	None
Bois Forte Band of Chippewa Health and Human Services	Complete	Yes	40	Yes	4/0

All Healthy Kids Minnesota 2022 partners except Duluth have been trained to recruit for the program. We are planning to train our Duluth partners in late February or early March. Trainings are conducted by MDH Biomonitoring staff and include all aspects of the recruitment process and study logistics, including the informed consent process, survey administration, data privacy, data entry, and sample collection and storage.

While we had hoped that all sites would be trained and begin recruitment in fall 2022, we experienced unanticipated delays in finalizing plans with partners and executing financial agreements. Thus, we will continue recruiting children for Healthy Kids Minnesota 2022 through this school year, ending recruitment in June 2023.

### **Free Private Well Testing**

Free private well testing is again available to families in the Northeast region. We are grateful for the continuing partnership with Olmsted County's Southeastern Minnesota Water Analysis Laboratory (SEM WAL) and funding from MDH Environmental Health and the Clean Water Fund. The free private well testing kits are offered to any family approached to participate in Healthy Kids in the Northeast region. So far, 15 families from Healthy Kids Minnesota 2022 have received free well water test kits. We are incorporating follow-up phone calls to remind families to return the well kits.

### **Continuous Quality Improvement**

Using REDCap (a secure method of robust data collection) feedback surveys, and virtual check-in meetings with partners, Minnesota Biomonitoring staff will continue to collect program quality indicators to assess and track recruitment and sample collection progress. The process during Healthy Kids Minnesota 2021 implementation allowed us to identify areas where process and quality improvements were needed. *We continue to use the lessons learned and feedback from Advisory Panel members from recent meetings to improve the quality of recruitment and sample collection protocols.*

### **Healthy Kids Minnesota 2023**

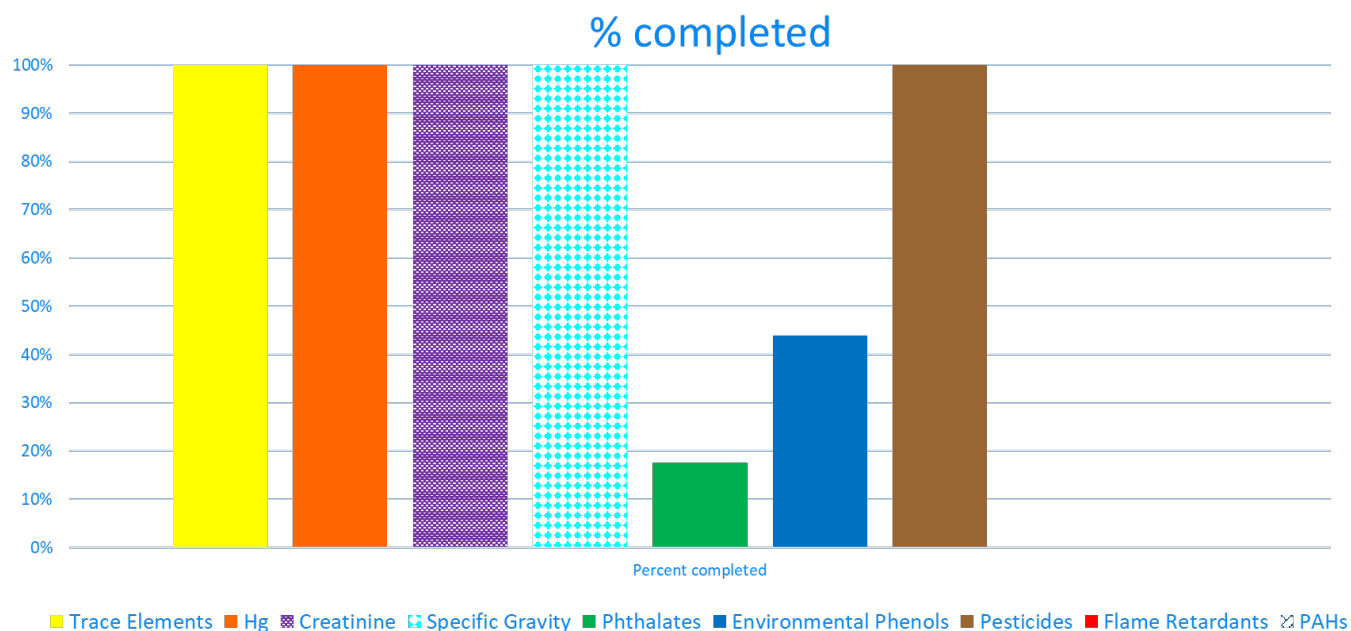
As previously shared, the third program cycle will rotate to Central Minnesota (a 14-county region including the St. Cloud area) and the West/Southwest Metro (a region of 18 school districts including Bloomington, Minnetonka, and St. Louis Park). We have started very fruitful conversations with staff in Bloomington Public Schools. We will continue to reach out to potential partners in these areas this winter and spring.

### **Healthy Kids Minnesota Laboratory Update**

#### **Laboratory analysis for Healthy Kids Minnesota 2021**

Figure 1 shows the percent of the 453 samples that have been analyzed for each of the methods in the Healthy Kids Minnesota program.

**Figure 1. Percentage of completed laboratory analyses,  
Healthy Kids Minnesota 2021**



We have also been performing follow-up testing for 10 Healthy Kids Minnesota 2021 participants for trace elements and arsenic speciation. The lab assembles recollection kits and coordinates a courier to deliver these specimens from the participant's home to our laboratory.

### Laboratory analysis for Healthy Kids Minnesota 2022

Laboratory analyses for trace elements, creatinine, and specific gravity are underway for samples from Healthy Kids Minnesota 2022.

This winter, part of the BEC lab will be closed due to planned renovations to the air handling system. We anticipate being shut down from January 20 through February 20, 2023 and will not run analyses for organic analytes during this time.

### Related Publications

- CNN, '[White lies](https://www.cnn.com/2022/11/29/health/skin-whitening-beauty-creams-mercury-vision-loss-mother-families-as-equals-intl-cmd/index.html)' series: Mercury in beauty creams believed to have caused vision loss in woman. Nov. 29, 2022. Available at: <https://www.cnn.com/2022/11/29/health/skin-whitening-beauty-creams-mercury-vision-loss-mother-families-as-equals-intl-cmd/index.html>
- Criswell, Rachel; Wang, Yuting; Christensen, Brock; Botelho, Julianne; Calafat, Antonia; Peterson, Lisa; Huset, Carin; Karagas, Margaret; Romano, Megan. Concentrations of Per- and Polyfluoroalkyl Substances in Paired Maternal Plasma and Human Milk in the New Hampshire Birth Cohort. *Environ Sci Technol* 2023 Jan 10;57(1):463-472. Available at: <https://pubs.acs.org/doi/10.1021/acs.est.2c05555>

- Laue, Hannah; Moroishi, Yuka; Palys, Thomas; Christensen, Brock; Criswell, Rachel; Peterson, Lisa; Huset, Carin; Baker, Emily; Karagas, Margaret; Madan, Juliette; Romano, Megan. Early-life exposure to per- and polyfluoroalkyl substances and infant gut microbial composition. Environmental Epidemiology 7(1):p e238, February 2023. Available at: [https://journals.lww.com/environepidem/Fulltext/2023/02000/Early\\_life\\_exposure\\_to\\_per\\_and\\_polyfluoroalkyl.4.aspx](https://journals.lww.com/environepidem/Fulltext/2023/02000/Early_life_exposure_to_per_and_polyfluoroalkyl.4.aspx)

## **Section Overview: Other Information**

This section contains documents that may be of interest to panel members.

- Upcoming Advisory Panel meeting dates
- Environmental Health Tracking and Biomonitoring Advisory Panel Statute
- Advisory Panel roster
- Biographical sketches of Advisory Panel members
- Biographical sketches of staff

## Upcoming Advisory Panel Meeting Dates

Advisory Panel meetings in 2023:

- June 13, 2023
- October 10, 2023

Unless otherwise announced, these meetings will take place from 1 - 4 pm.

*via Microsoft Teams*



## 144.998 ENVIRONMENTAL HEALTH TRACKING AND BIOMONITORING ADVISORY PANEL STATUTE

Subdivision 1. **Creation.** The commissioner shall establish the Environmental Health Tracking and Biomonitoring Advisory Panel. The commissioner shall appoint, from the panel's membership, a chair. The panel shall meet as often as it deems necessary but, at a minimum, on a quarterly basis. Members of the panel shall serve without compensation but shall be reimbursed for travel and other necessary expenses incurred through performance of their duties. Members appointed by the commissioner are appointed for a three-year term and may be reappointed. Legislative appointees serve at the pleasure of the appointing authority.

Subd. 2. **Members.** (a) The commissioner shall appoint eight members, none of whom may be lobbyists registered under chapter 10A, who have backgrounds or training in designing, implementing, and interpreting health tracking and biomonitoring studies or in related fields of science, including epidemiology, biostatistics, environmental health, laboratory sciences, occupational health, industrial hygiene, toxicology, and public health, including:

(1) At least two scientists representative of each of the following:

- (i) Nongovernmental organizations with a focus on environmental health, environmental justice, children's health, or on specific chronic diseases; and
- (ii) Statewide business organizations; and

(2) At least one scientist who is a representative of the University of Minnesota.

(b) Two citizen panel members meeting the specific qualifications in paragraph (a) shall be appointed, one by the speaker of the house and one by the senate majority leader.

(c) In addition, one representative each shall be appointed by the commissioners of the Pollution Control Agency and the Department of Agriculture, and by the commissioner of health to represent the department's Health Promotion and Chronic Disease Division.

Subd. 3. **Duties.** The advisory panel shall make recommendations to the commissioner and the legislature on:

- (1) Priorities for health tracking;
- (2) Priorities for biomonitoring that are based on sound science and practice, and that will advance the state of public health in Minnesota;
- (3) Specific chronic diseases to study under the environmental health tracking system;
- (4) Specific environmental hazard exposures to study under the environmental health tracking system, with the agreement of at least nine of the advisory panel members;
- (5) Specific communities and geographic areas on which to focus environmental health tracking and biomonitoring efforts;

- (6) Specific chemicals to study under the biomonitoring program, with the agreement of at least nine of the advisory panel members; in making these recommendations, the panel may consider the following criteria:
- (i) The degree of potential exposure to the public or specific subgroups, including, but not limited to, occupational;
  - (ii) The likelihood of a chemical being a carcinogen or toxicant based on peer-reviewed health data, the chemical structure, or the toxicology of chemically related compounds;
  - (iii) The limits of laboratory detection for the chemical, including the ability to detect the chemical at low enough levels that could be expected in the general population;
  - (iv) Exposure or potential exposure to the public or specific subgroups;
  - (v) The known or suspected health effects resulting from the same level of exposure based on peer-reviewed scientific studies;
  - (vi) The need to assess the efficacy of public health actions to reduce exposure to a chemical;
  - (vii) The availability of a biomonitoring analytical method with adequate accuracy, precision, sensitivity, specificity, and speed;
  - (viii) The availability of adequate biospecimen samples; or
  - (ix) Other criteria that the panel may agree to; and
- (7) Other aspects of the design, implementation, and evaluation of the environmental health tracking and biomonitoring system, including, but not limited to:
- (i) Identifying possible community partners and sources of additional public or private funding;
  - (ii) Developing outreach and educational methods and materials; and
  - (iii) Disseminating environmental health tracking and biomonitoring findings to the public.

Subd. 4. **Liability.** No member of the panel shall be held civilly or criminally liable for an act or omission by that person if the act or omission was in good faith and within the scope of the member's responsibilities under section 144.995 to 144.998.

## Environmental Health Tracking & Biomonitoring Advisory Panel Roster as of January 2023

Panel Member	Panel Member
<p>Jay Desai, PhD, MPH Chronic Disease and Environmental Epidemiology Minnesota Department of Health 85 E. 7<sup>th</sup> Place St. Paul, MN 55164 651-201-5882 <a href="mailto:Jay.Desai@state.mn.us">Jay.Desai@state.mn.us</a> MDH appointee</p>	<p>Ruby Nguyen, PhD Univ. of MN, School of Public Health Div of Epidemiology &amp; Community Health 7525A 1300 S 2<sup>nd</sup> St, Suite 300 WBOB Minneapolis, MN 55454 612-626-7559 <a href="mailto:nguyen@umn.edu">nguyen@umn.edu</a> University of Minnesota representative</p>
<p>Thomas Hawkinson, MS, CIH, CSP Stantec Consulting Services Inc. 7500 Olson Memorial Highway Suite 300 Golden Valley, MN 55427 763-252-6987 <a href="mailto:tom.hawkinson@stantec.com">tom.hawkinson@stantec.com</a> Statewide business organization representative</p>	<p>Sona Psarska, MS Minnesota Pollution Control Agency Water Assessment Section 520 Lafayette Road St Paul, MN 55155-4194 651-757-2781 <a href="mailto:Sona.Psarska@state.mn.us">Sona.Psarska@state.mn.us</a> MPCA appointee</p>
<p>Sarah Kleinschmidt, PhD 3M Company 3M Center, 220-6W-1 St. Paul, MN 55144 651-736-5485 <a href="mailto:sekleinschmidt@mmm.com">sekleinschmidt@mmm.com</a> Statewide business organization representative</p>	<p>Cathy Villas-Horns, MS, PG Minnesota Dept. of Agriculture Pesticide &amp; Fertilizer Management Division 625 Robert St N St Paul, MN 55155-2538 651-201-6697 <a href="mailto:Cathy.villas-horns@state.mn.us">Cathy.villas-horns@state.mn.us</a> MDA appointee</p>

Environmental Health Tracking and Biomonitoring Advisory Panel Meeting  
February 14, 2023

Panel Member	Panel Member
Jenni Lansing, MS, REHS City of Minneapolis Health Department – Environmental Programs 505 4th Ave S. Room 520 Minneapolis, MN 55415 612-709-9977 <a href="mailto:Jenni.Lansing@minneapolismn.gov">Jenni.Lansing@minneapolismn.gov</a> At-large representative	Eileen Weber, DNP, JD, PHN, BSN, RN Univ of MN, School of Nursing (active retiree status) 10623 Nyberg Ave S Hastings, MN 55033 651-276-1730 <a href="mailto:Weber058@umn.edu">Weber058@umn.edu</a> Nongovernmental organization representative
Zeke J. McKinney, MD, MHI, MPH, FACOEM HealthPartners Occupational and Environmental Medicine/Institute Univ. of MN, School of Public Health HealthPartners St. Paul Clinic 205 S. Wabasha St. St. Paul, MN 55107 <a href="mailto:zeke@umn.edu">zeke@umn.edu</a> At-large representative	Lisa Yost, MPH, DABT Ramboll Environ Local office 479 Iglehart Ave St Paul, MN 55101 651-470-9284 <a href="mailto:lyost@ramboll.com">lyost@ramboll.com</a> National business organization representative
Jill Heins Nesvold, MS American Lung Association of Minnesota 490 Concordia Ave St Paul, MN 55103 651-223-9578 <a href="mailto:Jill.heins@lung.org">Jill.heins@lung.org</a> Nongovernmental organization representative	

**Vacant Seats**

- Minnesota Senate appointee
- Minnesota House of Representatives appointee

## Biographical Sketches of Advisory Panel Members

**Jay Desai** is the Manager of the Chronic Disease and Environmental Epidemiology Section within the Division of Health Promotion and Chronic Disease at MDH. The Section includes the Environmental Epidemiology, the Minnesota Cancer Reporting System, and the Sickle Cell Data Collection program. It also includes the Long-Term Surveillance of Chronic Disease and Disabilities Annex, a program designed for response and recovery in emergency situations such as the COVID-19 epidemic. Jay received his Epidemiology doctorate from the University of Minnesota, is a chronic disease epidemiologist, and has worked in academic research and public health practice at the University of Minnesota, HealthPartners Institute, and the Minnesota Department of Health since 1993. He has a strong interest in diabetes, diabetes prevention, obesity, cardiovascular disease, chronic kidney disease, gout, cancer prevention, sickle cell disease, their underlying behavioral risk factors, and social determinants of health. He is also interested in implementation science and health equity. At MDH Jay spent 16 years as the epidemiologist for the Minnesota Diabetes Program. At HPI he worked on primary care clinical decision support; using EMR's for diabetes, cardiovascular disease, and obesity surveillance; diabetes prevention in low income individuals, and HPV vaccination in underserved communities. Jay is also a standing member of the NIH Healthcare and Health Disparities study section.

**Tom Hawkinson** is the Senior Industrial Hygienist for Stantec Consulting Services Inc. (formerly Wenck Associates) in Golden Valley, Minnesota. He completed his MS in Public Health at the University of Minnesota, with a specialization in industrial hygiene. He is certified in the comprehensive practice of industrial hygiene and a certified safety professional. He has worked in EHS management at a number of Twin Cities based companies, conducting industrial hygiene investigations of workplace contaminants and done environmental investigations of subsurface contamination, both in the United States and Europe. He has taught statistics and mathematics at both graduate and undergraduate levels as an adjunct and is on faculty at the Midwest Center for Occupational Health and Safety, which is a NIOSH-sponsored education and resource center at the University of Minnesota's School of Public Health.

**Sarah Kleinschmidt** is an epidemiologist with more than 20 years of experience in population-based epidemiologic research and infectious disease clinical trials. She joined the 3M Company in 2016 and serves as an epidemiologist within the Corporate Occupational Medicine Department where she evaluates the health experience of employee groups. Prior to joining 3M, Dr. Kleinschmidt was an occupational epidemiologist for DuPont in Wilmington, DE and taught epidemiology at the University of Delaware as an Adjunct Instructor. She has also held research positions at the University of Iowa, Illinois Department of Public Health, and Southern Illinois University School of Medicine. She earned a B.S. and M.S. in biology from the University of Illinois at Springfield, and a M.S. and Ph.D. in epidemiology from the University of Iowa with specialized training in both infectious disease and occupational epidemiology.

**Jenni Lansing** is the Sr. Environmental Research Analyst for the Minneapolis Health Department – Environmental Programs. She has been with the City for 10 years and during that time her work has included community air monitoring, pollution reduction projects with businesses, and

drinking water protection at transient noncommunity water systems. Ms. Lansing has a B.S. in Fisheries and Wildlife Conservation Biology from the University of Minnesota - Twin Cities and a M.S. in Environmental Sciences from the University of Colorado.

**Zeke McKinney** is a board-certified Occupational and Environmental Medicine (OEM) physician who works at the HealthPartners Clinic in St. Louis Park, MN. He is additionally board-certified in Public Health & General Preventive Medicine, Clinical Informatics, and Lifestyle Medicine. He completed all of his medical training here in Minnesota. His professional interests are in preventing work-related illness/injury, improving data-driven decision-making in clinical contexts, environmental toxicology, health equity, environmental justice, public safety medicine, managing complex impairment/disability, and increasing the health literacy of patients and communities. He practices clinical occupational and environmental medicine in the Twin Cities, and he is one of few clinicians in Minnesota who evaluates work and community-related environmental toxicologic exposures. He is the Minnesota physician contact for the Pediatric Environmental Health Specialty Units (PEHSU), a national resource for environmental medical information in partnership with ATSDR and CDC.

**Jill Heins Nesvold** serves as the National Director of Lung Health for the American Lung Association. Her responsibilities include program oversight and evaluation related to asthma, chronic obstructive lung disease (COPD), influenza, and quality improvement. She holds a master's degree in health management and a short-course master's degree in business administration. She has published extensively in a variety of public health areas.

**Ruby Nguyen** is an assistant professor at the University of Minnesota School of Public Health Division of Epidemiology & Community Health. She received her PhD in Epidemiology from Johns Hopkins University. Ruby's research focuses on maternal, child and family health; the etiology of reduced fertility; pregnancy-related morbidity, and infertility and later disease. Currently, Ruby is conducting a longitudinal study examining the role of endocrine disrupting chemicals in child development. From 2016-2017, Ruby was Co-Principal Investigator of a statewide prevalence study investigating violence against Asian women and children.

**Sona Psarska** is a research scientist at the Minnesota Pollution Control Agency predominantly working on human health risk assessment projects. Among her responsibilities are maintaining various risk-based values and providing human health risk assessment support to remediation and other agency programs. She has a Master of Science in Land and Atmospheric Science from the University of Minnesota. Prior to joining the MPCA, she worked in environmental consulting where, among other projects, she worked on complex pollutant fate and transport evaluations and risk assessments for industrial clients.

**Cathy Villas Horns** is the Hydrologist Supervisor of the Incident Response Unit (IRU) within the Pesticide and Fertilizer Management Unit of the Minnesota Department of Agriculture. She holds a Master of Science in Geology from the University of Delaware and a Bachelor of Science in Geology from Carleton College and is a licensed Professional Geologist in MN. The IRU oversees or conducts the investigation and cleanup of point source releases of agricultural chemicals (fertilizers and pesticides including herbicides, insecticides, fungicides, etc. as well as wood treatment chemicals) through several different programs. She has worked on complex

sites with Minnesota Department of Health and MPCA staff, and continues to work with interagency committees on contaminant issues. She previously worked as a senior hydrogeologist within the IRU, and as a hydrogeologist at the Minnesota Pollution Control Agency and an environmental consulting firm.

**Eileen Weber** is a nurse attorney and Clinical Associate Professor Ad Honorem at the University of Minnesota School of Nursing (active retiree status). She founded the Upper Midwest Healthcare Legal Partnership Learning Collaborative. She earned her Doctor of Nursing Practice degree in Health Innovation and Leadership in 2014 from the University of Minnesota. She earned her RN diploma from Thomas Jefferson University Hospital in Philadelphia, PA, her BSN summa cum laude from the University of Minnesota, and her JD in the founding class of the University of St. Thomas School of Law in Minneapolis. Her clinical experience and past certifications have largely been in urban critical care and emergency nursing. She has served as vice-president of the Minnesota Nurses Association, earning awards for political action and outstanding service. She represented nursing on the Minnesota Health Care Commission, was a regular editorial writer for the St. Paul Pioneer Press and an occasional op-ed contributor for the Star Tribune. She founded Friends of Grey Cloud and worked with environmental leaders at the local, regional, state and national levels to protect Lower Grey Cloud Island from harmful development and to conserve the Grey Cloud Sand Dune Prairie. She has extensive experience in legislative lobbying, community activism, and political campaign management. Her scholarly work is focused on the intersection of law, public policy, and interprofessional healthcare practice and education.

**Lisa Yost** is a Principal Consultant at RAMBOLL ENVIRON, an international consulting firm. She is in their Health Sciences Group, and is based in St. Paul, Minnesota. She completed her training at the University of Michigan's School of Public Health and is a board-certified toxicologist with expertise in evaluating human health risks associated with substances in soil, water, and the food chain. She has conducted or supervised risk assessments under CERCLA, RCRA, or state-led regulatory contexts involving a wide range of chemicals and exposure situations. Her areas of specialization include exposure and risk assessment, risk communication, and the toxicology of such chemicals as PCDDs and PCDFs, PCBs, pentachlorophenol (PCP), trichloroethylene (TCE), mercury, and arsenic. Lisa is a recognized expert in risk assessment and has collaborated in original research on exposure issues, including background dietary intake of inorganic arsenic. She is currently assisting in a number of projects including a complex multi-pathway risk assessment for PDDD/Fs that will integrate extensive biomonitoring data collected by the University of Michigan. She is also an Adjunct Instructor at the University of Minnesota's School of Public Health.

## Biographical Sketches of Staff

**Fathi Ahmed** is currently the Program Manager with MN Biomonitoring. She received a bachelor's degree in Public Health with concentrations in Community Health and Public Policy from St. Catherine University. Fathi worked in the Biomonitoring program in 2016-2017 as a Student Worker on the MN FEET study as she was getting her B.S. in Public Health. Since then, she has done work in different public health, community engagement, and research positions. These include work with The Beautywell Project, SoLaHmo, the University of Minnesota, and the International Institute of Minnesota. Fathi has recently re-joined the Biomonitoring team as the new Program Manager in January 2023.

**Sheila Amenumey** is currently the Biomonitoring Epidemiologist at MDH. Sheila collaborates with the Biomonitoring Program Director and key stakeholders leading the various biomonitoring projects including Healthy Kids Minnesota, the statewide project focused on children's environmental health. She completed her MPH in Maternal and Child Health and PhD in Water Resources Science (Water Quality Hydrology Emphasis) at the University of Minnesota. Prior to her work with the biomonitoring program, Sheila worked with the Maternal and Child Health Section at MDH. Her role as the Maternal and Child Health Epidemiologist involved leading and collaborating with external partners in conducting program evaluation across multiple federal adolescent health grants, and assisting them in monitoring program outcomes and achievement of their health and education goals for the youth they serve. Before coming to MDH, Sheila conducted water quality research at the University of Minnesota to determine the impact of agriculture on water quality.

**Jessie Carr** supervises the Environmental Epidemiology Unit at MDH and is the Principal Investigator for the Environmental Public Health Tracking program. Jessie received her MPH from the Mailman School of Public Health at Columbia University and DrPH from the University of Pittsburgh, where her training and research focused on exposure assessment, GIS and spatial statistics, community-engaged research methods, and environmental health disparities. Prior epidemiology studies have examined social susceptibility to air pollution exposure in chronic disease etiology and adverse birth outcomes.

**Carin Huset** has been a research scientist in the Environmental Laboratory section of the MDH Public Health Laboratory since 2007. Carin received her PhD in Chemistry from Oregon State University in 2006 where she studied the fate and transport of perfluorochemicals in aqueous waste systems. In the MDH PHL, Carin provides and coordinates laboratory expertise and information to program partners within MDH and other government entities where studies require measuring biomonitoring specimens or environmental contaminants of emerging concern. In conjunction with these studies, Carin provides biomonitoring and environmental analytical method development in support of multiple analyses.

**Tess Konen** graduated from the University of Michigan's School of Public Health with a master's degree in Occupational Environmental Epidemiology. She completed her thesis on the effects of heat on hospitalizations in Michigan. She worked with MN Tracking for 2 years as a CSTE Epidemiology Fellow where she was project coordinator for a follow-up study of the Northeast Minneapolis Community Vermiculite Investigation cohort. She currently is an epidemiologist



working on birth defects, pesticides, and climate change, and is developing new Disaster Epidemiology tools for MDH-HPCD.

**Jessica Nelson** is Program Director and an epidemiologist with MN Biomonitoring. She works on design, coordination and analysis of biomonitoring projects, and has been the Principal Investigator for the Healthy Rural and Urban Kids, MN FEET and PFAS studies. Jessica received her PhD and MPH in Environmental Health from Boston University School of Public Health where her research involved the epidemiologic analysis of biomonitoring data on perfluorochemicals. Jessica was the coordinator of the Boston Consensus Conference on Biomonitoring, a project that gathered input and recommendations on the practice and uses of biomonitoring from a group of Boston-area lay people.

**Kathy Raleigh** is an epidemiologist for MN Tracking. She completed her PhD in Environmental Health at the University of Minnesota's School of Public Health and her MPH in Environmental and Occupational Health at the University of Arizona. She has worked on a variety of environmental health projects including: pesticide exposure in children, occupational asthma, mercury exposure in women and children, and occupational exposure to PFOA. Prior to coming to MN Tracking, Kathy was working on maternal and child health projects both internationally with USAID and, more recently, at MDH. She will also be working on the coordination and collection of hospital discharge data, including heart disease and asthma surveillance projects for MN Tracking with a focus on health disparities.

**Deanna Scher** is an epidemiologist in the Environmental Epidemiology Unit. Since joining MDH in 2007, she has led a variety of studies to assess exposures to, and health impacts from environmental contaminants, particularly among at-risk and vulnerable populations. She currently serves as Chair of the MDH Institutional Review Board and the U.S. Environmental Protection Agency's Children's Health Protection Advisory Committee. Deanna received her Ph.D. in Environmental Health Sciences from the University of Minnesota, School of Public Health, where her research focused on methods to integrate biomonitoring and biological plausibility into pesticide risk assessment and epidemiology studies.

**Blair Sevcik** is an epidemiologist with MN Tracking at the Minnesota Department of Health, where she works on the collection and statistical analysis of public health surveillance data for MN Tracking. Prior to joining MN Tracking in January 2009, she was a student worker with the MDH Asthma Program. She received her Master of Public Health degree in epidemiology from the University of Minnesota School of Public Health in December 2010.

**Lynn Treadwell**, Minnesota Public Health Data Portal Coordinator, is an experienced digital communications leader with a solid understanding of websites and application development, social media and digital marketing communications in the health and government sectors. Lynn brings over 10 years of experience in developing optimized online user experiences and digital communications to the position. She will provide stewardship to Minnesota's public health data portal focusing on audience understanding and interactive development best practices. Lynn has an AAS in graphic design, attended the School of Journalism at University of Minnesota and has a mini-Master's in Marketing from St. Thomas University.