



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Michigan Department of Environment, Great Lakes, and Energy Toxics Steering Group 2021 Annual Report

I. INTRODUCTION

The Toxics Steering Group (TSG) is the Michigan Department of Environment, Great Lakes, and Energy's (EGLE) forum for discussion of human health and risk assessment issues related to exposure to environmental contaminants. TSG members are risk assessors, toxicologists, and other related state experts within EGLE, as well as the Michigan Department of Health and Human Services (MDHHS) and the Michigan Department of Agriculture and Rural Development (MDARD).

The TSG meets quarterly, or more if needed, with the goal of using the best available science to address human health and risk assessment issues identified by the TSG or EGLE management. The TSG monitors and evaluates the latest scientific literature and general risk assessment issues and makes recommendations relative to EGLE's environmental programs.

This report summarizes the collaborations and other activities of TSG members during 2021, such as:

- Efforts to increase inclusiveness and opportunities for all TSG members
- Efforts to raise awareness of timely toxicological resources
- Efforts to address per- and polyfluoroalkyl substances (PFAS) issues
- Obtaining training in various areas of toxicology and risk assessment

It also highlights needs and recommendations from the group, including:

- Recommendations for needed staffing
- Continued needs for training in best available science in toxicology and risk assessment

II. 2021 TSG MEMBERSHIP

Tim Achee, EGLE
Jordan Bailey, DHHS
Sarah Bowman, EGLE
Shannon Briggs, EGLE
Dennis Bush, EGLE
Jacob Carrick, DHHS
Xun Che, DHHS
Aaron Cooch, DHHS
Mike Depa, EGLE
Bill Farrell, DHHS
Lisa Fischer, DHHS
Kay Fritz, MDARD
Jennifer Gray, DHHS

Kory Groetsch, EGLE
Brian Hughes, EGLE
Rosa Jaiman, DHHS
Sesha Kallakuri, DHHS
Andrea Keatley, DHHS
Amber Klase, DHHS
Grace Kuan, EGLE
Doreen Lehner, EGLE
Shane Morrison, EGLE (Chair)
Aubrey Munsell, DHHS
Mounica Nandula, DHHS
Sara Nedrich, EGLE
Lisa Quiggle, DHHS

Alex Rafalski, DHHS
Brandon Reid, DHHS
Geoff Rhodes, EGLE
Divinia Ries, EGLE
Joe Rogers, EGLE
Joy Taylor Morgan, EGLE
Joost Vant Erve, DHHS
Puneet Vij, DHHS
Marcus Wasilevich, DHHS
Eric Wildfang, EGLE
Keisha Williams, EGLE

III. SUMMARY OF THE TSG WORKGROUP and SUBCOMMITTEE ACTIVITIES IN 2021

a) Charter Workgroup

Members: Keisha Williams, Chair
Kay Fritz
Jennifer Gray
Amber Klase
Shane Morrison
Alex Rafalski

This subcommittee was established in 2021 to review the existing outdated TSG policy and procedure (e.g., uses old department name) to allow for greater interagency inclusion and participation. For example, the current policy and procedure is EGLE-specific which limits the roles and responsibilities of TSG members from other departments. There have been group discussions about whether this should be changed, as well addressing other needed updates to the policy and procedure.

One recommendation was to adopt an interagency charter and rescind the EGLE-specific policy and procedure. A charter could be drafted to reflect the shared roles and responsibilities across the TSG member departments while also maintaining group priorities.

Upon receiving approval from department management to work towards an interagency charter, TSG members representing each department have been collaborating on updating a draft charter to share with the full TSG membership.

b) Newsletter Workgroup

Members: Brian Hughes, Chair
Grace Kuan
Doreen Lehner
Shane Morrison
Brandon Reid
Divinia Ries
Eric Wildfang

The TSG newsletter provides a platform for members to stay updated on timely toxicology information, webinars and recordings, toxicology tools, trainings, regulatory issues, and articles of interest. In 2021, the workgroup produced and distributed four newsletters.

c) Brownbag Presentations

Organizer: Eric Wildfang

The TSG hosted two brownbag presentations in 2021. Nicholas Ball (senior toxicologist at the Dow Chemical Company) presented on his experience with read-across as an alternative approach to animal testing. Mala Hettiarachchi (Senior Engineer at Environmental Resources Group and an Adjunct Assistant Professor at Wayne State University) gave a presentation covering the state of the science, challenges, and controls for plastic and microplastic pollution.

IV. COLLABORATIVE ACTIVITIES

- EGLE and MDHHS toxicologists participated in the volatilization to indoor air pathway site screening and evaluation team to raise awareness and prioritize response actions for 19 sites with environmental contamination in excess of interim response screening levels.
- EGLE, DHHS, and MDARD toxicologists participated in many MPART workgroups and a sub-workgroup to help protect the environment, human health, food, and agriculture in Michigan.
- EGLE toxicologist assisted the DHHS epidemiologist lead the COVID wastewater surveillance for the State of Michigan.
- Following up on citizen complaints around odor issues, DHHS and EGLE toxicologists evaluated ambient air monitoring data for health risks to communities. The associated risk communication was important for both internal and external stakeholders.

V. OUTREACH AND EDUCATION

- EGLE toxicologist Co-presented Remediation and Risk Management Series: Volatilization to Indoor Air Screening Levels.
- MDHHS toxicologists presented at many MPART townhall meetings for residents near PFAS sites.

VI. WEBINARS AND TRAININGS ATTENDED

- Region 5 Vapor Intrusion Technical Calls
- State Risk Assessor conference calls
- Association for Environmental Health and Sciences Foundation (AEHS) 31st Annual International Conference on Soil, Water, Energy, and Air
- Emerging Science on Indoor Chemistry and Implications workshop
- PFAS: Air Emission Impacts & Stack Testing
- EGLE RRM Series - Rapid and Effective Characterization of Building Susceptibility to Vapor Intrusion with Building Pressure Control
- ITRC Vapor Intrusion Mitigation Training
- Twenty-first Century Tools for Environmental Protection: AQD's Foray into Real-Time Monitoring, Fine-Scale Modeling, and Advanced Data Analytics
- EGLE RRD Digger Deeper Webinars
- Introduction to R
- Modeling Food Safety and Animal Health Risks Using R

- Root Cause Analysis for Retail Food Safety Course
- Integrative Modeling and Data Evaluation Strategies to Predict PFAS Fate and Effects
- PFAS Research, Education, and Action for Community Health
- Sorption of Per- and Polyfluoroalkyl Substances by Soils from Water
- Non-animal Approaches for Mixtures Assessment
- Seeds of Health: Safer Soils for Growing Food
- Plastics, Endocrine Disrupting Chemicals and Health: Findings of a New Joint Report of the Endocrine Society and International Pollutants Elimination Network (IPEN)
- Emerging Contaminants in the Environment Conference
- Livestock Mortality Management in Chemical or Radiological Incidents
- Keeping Food in the Loop with Food Waste Management
- Decontamination in Harvest
- Great Lakes Virtual PFAS Summit
- USEPA-ORD Listening Sessions on Cumulative Impacts Research

VII. FUTURE NEEDS AND RECOMMENDATIONS OF THE TSG

- Statistical and data analytic training using the program language in R to facilitate better risk assessment conclusions
- Receive departmental support to update the Civil Service Toxicologist 9-12 job specifications that are too restrictive and hinder recruitment of qualified applicants
- Training on risk communication
- Training on environmental justice and cumulative risk assessment
- Training on software like the USEPA's benchmark dose software for dose response modeling, and other best available science and practices in toxicology and risk assessment (e.g., chemical informatics tools and read across to fill data gaps).