Valerie Zartarian, Ph.D.

U.S. EPA Career Summary: 1998-2025

Program Results: human exposure research, decision-support tools, technical assistance, regulatory support

- Produced lead exposure maps supporting EPA's Lead Strategy and President's Task Force (PTF) priority actions: published 5 research papers to inform prevention/mitigation actions in U.S. overburdened communities; support Lead Strategy Goal 2 FY23, FY24, FY25 performance metrics. U.S. Lead Exposure Hotspots Analysis & whole-of government blueprint in 10/24 White House lead fact sheet. Success story examples using published maps.
- Modeled children's exposures used by EPA and HUD to update national standards and policy for drinking water, dust lead, and soil policy: 2017, 2020, 2023 papers directly used and cited in benefits analyses of EPA technical support documents for Lead and Copper Rule Improvements & Dust Lead Hazard Standards (summarized here); and in HUD's FY25 updated soil lead action level policy. Supported Biden-Harris Lead Pipe and Paint Action Plan.
- Spearheaded U.S. interagency PTF International Lead Exposure Workgroup to address childhood lead poisoning (in 2023 WH fact sheet) & EPA role in UNICEF Lead Toolkit; laid groundwork for EPA-AID MoU, Lead-Free Future
- Developed/applied probabilistic exposure models (SHEDS) used in EPA Office of Pesticide Programs risk assessments for organophosphates, pyrethroids, n-methyl carbamates, arsenic, methyl mercury, PCBs, CCA
- Conceived, led community- & tribal-focused decision support tools to advance understanding of environmental justice and cumulative risks/impacts: EPA's C-FERST; Tribal-FERST; first school-building Health Impact Assessment.
- Advanced exposure science: children's exposure factors in EPA Exposure Factors Handbook, Human Exposure Assessment Guidelines, Age Groups Exposure guidance; EPA and external workshops on probabilistic exposure models, children's activity patterns, Pb research; WHO exposure/risk assessment harmonized approaches

Stature in Professional Field: ST senior research physical scientist; human exposure & environmental engineering

- Invited extensively to present at external scientific peer reviews (e.g., EPA SAB and FIFRA SAP), conferences (e.g., ISEA, ISES-ISEE, NEHA, SRA, SOPHIA), workshops (e.g., interagency PFAS and Pb workshops), universities (Harvard, GWU, Stanford, Johns Hopkins) and represent EPA on interagency workgroups in the U.S. and internationally: EPA's Children's Health Protection Advisory Committee, National Environmental Justice (EJ) Advisory Committee, Board of Scientific Counselors, Science Advisory Board, FIFRA Scientific Advisory Panels, high impact science assessment external peer review of modeling for the Lead and Copper Rule; CDC's Lead Exposure Prevention Advisory Committee; Center for Global Development; UNEP Africa consultation; Federal PFAS Information Exchange; National Tribal Science Forum & Caucus; Environmental Council of States, Environmental Research Institute of States; EU Transatlantic and Global Risk Assessment Dialogues; G7 and G20 lead technical workshops
- Lead (Pb) leadership: serving on EPA's Lead Coordinating Committee (LCC), President's Task Force (PTF) on Environmental Health Risks and Safety Risks to Children, PTF Lead (Pb) Subcommittee; leads intra- and inter-agency mapping workgroups. EPA ORD 2018-19 Executive Lead for Pb. Writing Team member: EPA Lead Strategy, Federal Lead Action Plan. Lead (Pb) lead for EPA/ORD Center for Public Health and Environmental Assessment. EPA Science-Policy Liaison for US-International Lead Efforts; co-led PTF International Lead Exposure Workgroup.
- Successfully initiated, implemented exposure research projects & led teams to protect vulnerable populations
- EPA co-chair for interagency Climate Justice subcommittee. Presented at White House/CEQ Climate Equity Event
- Senior advisor (part-time) to EPA's Office of Children's Health Protection director to advance whole-of-government collaborations for PTF priority areas: lead poisoning, other chemicals, climate change, asthma
- Led and coauthored >70 publications: highly cited peer-reviewed journal articles, technical reports, book chapters on wide range of human exposure topics for various chemicals and populations.
- Awards: Presidential Rank Award nomination; EPA Gold medal nomination for EPA Strategy to Reduce Lead Exposures and Disparities in U.S. Communities; 4 EPA Gold Medals (for Region 1 Lead Compliance Action Team; EPA Drinking Water Lead Action Plan Team; Federal Action Plan to Reduce Childhood Lead Exposures Team; advancing scientific basis for assessing children's environmental exposures); 4 Bronze Medals; 6 awards for Exceptional Technical assistance to EPA regions or program offices; Children's Environmental Health award; Environmental Justice awards; Scientific & Technological Achievement Awards (levels I, II, III) for Refining Exposure Factors Used in Human Risk Assessments; Probabilistic Methyl Mercury Exposure Modeling to Inform Decision Making; Probabilistic Exposure Modeling Used in EPA's Risk Assessment of Children Contacting CCA-Treated Playsets and Decks; numerous other EPA team and leadership awards; International Society for Exposure Analysis Outstanding Young Scientist Award