

JAMES T. DURANT

MSPH, CIH

Environmental Health Scientist with 20+ years of experience in environmental sampling, industrial hygiene, data analysis, air modeling, risk assessment, and toxicology. Experienced in statistical analysis of environmental and biomonitoring data. Experienced with multimedia environmental sampling, including incremental sampling designs. Highly skilled in R for probabilistic risk assessment, air dispersion modeling, groundwater vapor intrusion modeling, and data visualization.



CONTACT INFO

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EXPERIENCE

Present
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2019

Environmental Health Scientist (Exposure Investigation Section, GS-14)

Agency for Toxic Substances and Disease Registry (ATSDR)

📍 Atlanta, GA

- Provided statistical analysis and visualization of ethylene oxide air sampling data collected at two sterilization plants and one chemical plant in Illinois. The analysis improved estimates of exposure, and demonstrated a significant improvement in ethylene oxide concentrations after controls were instituted at these sites.
- To support an ATSDR Exposure Investigation at a former lead smelter site, compared blood lead and urinary arsenic levels measured in community members to age adjusted NHANES data and analyzed exposure questionnaire data. The analysis demonstrated a small, but significant increase in lead in the community, and an association of increased blood lead levels with exposure to attic dust.
- Developed R package to perform groundwater vapor intrusion modeling using EPA's Johnson and Ettinger Model, with enhancements for visualization and probabilistic inputs. The package was used to efficiently generate estimates of exposure from groundwater vapor intrusion at a site with hundreds of buildings and scores of chemicals.

2019
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2017

Branch Associate Director for Science (Acting)

Agency for Toxic Substances and Disease Registry

📍 Atlanta, GA

- Conducted scientific review and technical clearance of health assessments, health consultations, exposure investigations, protocols, presentations, manuscripts and other publications to ensure that the data were clearly and transparently presented, the conclusions were supported by the data, and the recommendations were impactful to public health.
- Developed ATSDR guidance documents on statistical methodologies and training related to the guidance. Guidance was incorporated into the ATSDR's Public Health Assessment Guidance manual and training and ensures that health assessors carefully consider data quality objectives and robust estimation of exposure point concentration estimates.

2017
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2012

Environmental Health Scientist (Science Support Branch, GS - 13)

Agency for Toxic Substances and Disease Registry

📍 Atlanta, GA

- Analyzed and visualized a database containing over 30 years of hourly and daily air quality measurements from multiple monitoring networks for hundreds of chemical species to support the public health assessments at Corpus Christi, TX, and Midlothian, TX. Analysis was used to better understand long term community exposure spatially, as well as identify that for many compounds, exposure was decreasing over time.
- Used R and Bash to process 12 terabytes of prognostic meteorological data for CALPUF air dispersion system to model emissions and screen emissions from a paper mill for contaminants to include in an ATSDR Exposure Investigation.
- Developed a package of R functions that download data, run AERMET, AERMINUTE and AERSURFACE, and provides graphic and tubular quality assurance of output. This package was adapted and used by U.S. EPA to perform AERMET analysis at over 800 sites across the country, as well as used by ATSDR to support site specific modeling.

*Last updated on
2025-03-04.*

2012
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2008

● **Environmental Health Scientist (Emergency Response, GS-13)**

Agency for Toxic Substances and Disease Registry

📍 Atlanta, GA

- Developed public health evaluations of acute and emergency chemical releases and developed appropriate recommendations to protect public health.
- Researched and developed chemical specific documents describing toxicology and environmental chemistry of chemicals including benchmark dose modeling.
- Deployed domestically and internationally, supporting agency responses such as Deep Water Horizon, and acute lead poisoning in communities engaged in artisan gold mining in Africa.

2008
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2002

● **Environmental Health Scientist (Exposure Investigations and Site Assessment Branch, GS-11,12,13)**

Agency for Toxic Substances and Disease Registry

📍 Atlanta, GA

- Developed or contributed to public health documents pertaining to fifteen different sites, including development of web pages and fact sheets for public use. Contaminants of concern included asbestos, metals, volatile organic compounds and polycyclic aromatic hydrocarbons and dioxin like compounds in air, water and soil/sediment.
- Conducted three exposure investigations for the agency pertaining to metals, dioxins, and asbestos. Analyzed results of exposure investigations and developed reports.
- Designed environmental sampling component of a study examining lead and arsenic exposure in a Peruvian community with a lead mine.

2002
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1998

● **Safety Specialist/Industrial Hygienist**

Central Arizona Project

📍 Phoenix, AZ

- Spearheaded new accident/near miss reporting, investigation and database-tracking system. Brought the district into compliance with OSHA respiratory protection, hearing conservation, worker lead protection and blood-borne pathogens standards. Established an industrial hygiene testing program for evaluating employee exposure to noise and air contaminant hazards.
- Conducted risk assessments including monitoring and mitigation strategies for occupational safety and health hazards.

1998
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1996

● **Industrial Hygienist II**

Arizona Division of Occupational Safety and Health

📍 Phoenix, AZ

- Inspected workplaces for compliance with applicable OSHA safety and health standards. Assessed exposure to occupational health hazards and performed air and noise monitoring. Investigated fatality and catastrophe incidents for the division.
- Conducted over 80 OSHA routine and complaint based inspections in a variety of workplace settings, including 2 fatality investigations.
- Fielded workplace safety complaint calls and, as indicated, performed informal complaint investigations through telephone contact with employers.



EDUCATION

1996

● **University of Alabama at Birmingham**

M.S.P.H. Industrial Hygiene (GPA: 3.69/4.0)

📍 Birmingham, AL

1993

● **University of Georgia**

B.S.E.H. Environmental Health Science (GPA: 3.54/4.0)

📍 Athens, GA



HOBBIES AND VOLUNTEER ACTIVITIES

Amateur Radio: Amateur Extra Class License KE4MKG

Georgia Appalachian Trail Club: Section 9.13 maintainer, Level 1 Sawyer (chainsaw)

Lawrenceville Cooperative Ministry (community food bank): Screener/Interviewer