

ANDREW COHEN, PHD, PH

MEET THE EXPERT

Andrew J.B. Cohen, PhD, PH is a Contaminant Hydrogeologist with over 30 years of experience in consulting, teaching, and research focused on the characterization and remediation of contaminated sites. Clients include Fortune 500 companies, environmental attorneys, government agencies, and non-profit organizations. Skilled in dissecting complex data sets to establish causation, enhanced data interpretation, and developing conceptual models essential for informed decision-making. Demonstrated proficiency in presenting clear, persuasive findings to stakeholders. He is Founder of GroundwaterU.org and a co-author of a **foundational book**, which has been downloaded 16,000+ times globally.

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EXPERT WITNESS & TECHNICAL ADVISOR

As an **Expert Witness**, I prepare detailed reports, rebuttals, and can provide deposition and testimony support. I provide expert analysis of contaminated **groundwater, soil, sediment, and surface water** to identify contamination sources, establish causation, apportionment, and assess environmental risk and remediation cost. I synthesize historical and current site data to reveal flaws in outdated conceptual models that underlie remedial and legal strategies. Misinterpretation of site conditions drives up costs, extend cleanup timelines, increase liabilities, and undermine legal outcomes.

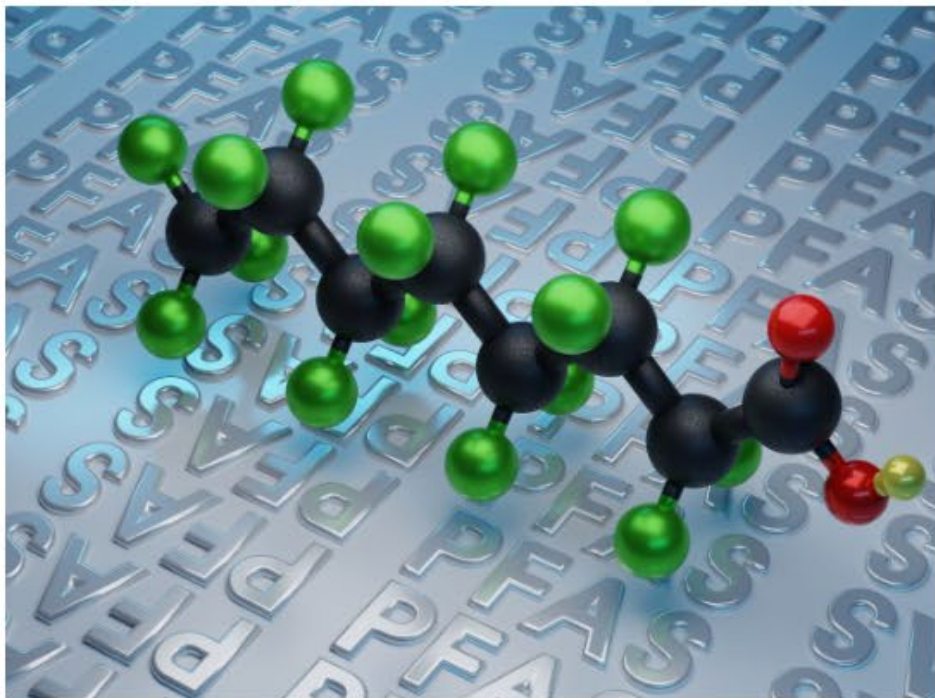
I can also serve as an **Independent Technical Advisor** to legal teams or responsible parties, guiding technical evaluations to interpret and communicate complex data, thereby supporting stronger legal and remedial decisions. My independent position helps optimize data collection and analysis performed by consulting firms, thereby **reducing costs**.



ABOUT

EXAMPLES

CONTACT



FORENSIC HYDROGEOLOGY

Forensic hydrogeology is fundamental to the Expert Witness role; it is about making the unseen visible—understanding where contaminants originate, when they were released, and how they migrate through groundwater, soil, sediment, and rock. It goes beyond isolated measurements and requires the integration of geologic, hydraulic, and chemical data. The work combines conceptual interpretation with mathematical analysis. Every site tells a distinct story shaped by geologic complexity and human activity. It demands experienced evaluation of all data, including outliers, often overlooked but rich with insight. My work emphasizes discovery through careful, nuanced analysis; clear communication of complex conditions; strategic insight; and close collaboration with clients to support remediation, insurance cost recovery, and legal decisions.

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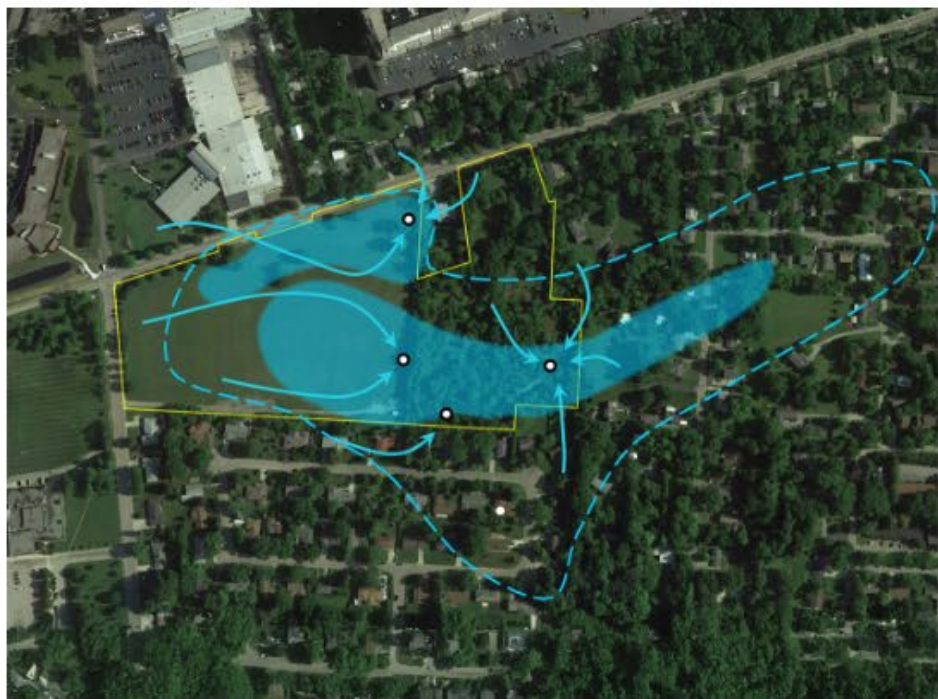
SITE ASSESSMENT & CHARACTERIZATION

I specialize in comprehensive site assessments, including hydrogeologic characterization of groundwater, rock, soil, sediment, and surface water. I develop conceptual site models (CSMs) that clarify complex contamination scenarios, aiding in both technical evaluations and legal contexts. My work includes evaluating groundwater-sediment-surface water interactions, interpreting historical environmental data, contaminant fate and transport modeling, and designing targeted investigation strategies. I work collaboratively to prepare site sampling plans and investigation results reports, which support environmental compliance and decision-making. I also serve as an independent reviewer, helping clients evaluate and optimize investigation scopes, thereby avoiding unnecessary costs and improving legal positioning.

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CONTAMINANT FATE, TRANSPORT, AND REMEDIATION

Understanding how contaminants move through the environment is critical for effective site management. I analyze contaminant fate and transport processes for a wide range of pollutants, including PFAS, DNAPL, and metals. My expertise in groundwater flow and contaminant transport modeling supports remedial design and site assessments. I evaluate natural attenuation processes to optimize remediation strategies and assess the performance of groundwater treatment systems. Additionally, I use advanced chemical fingerprinting techniques to differentiate contaminant plumes and apply compound-specific isotope analysis (CSIA) to confirm degradation pathways and identify contamination sources.

GET STARTED

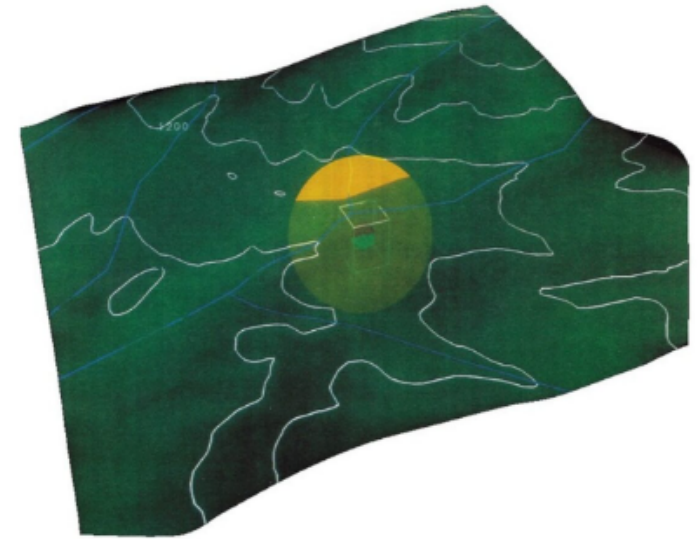
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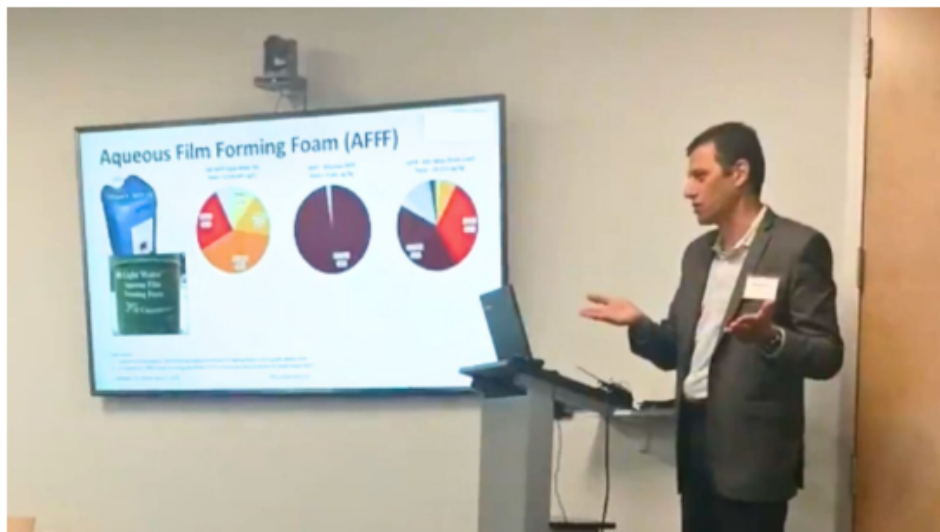
DATA ANALYSIS AND TECHNICAL TOOLS

Environmental investigations often produce fragmented, underused data. Without proper synthesis, this leads to uncertainty, inefficiency, and flawed conclusions. I turn complex site data into clear, defensible insights that support causality arguments and clarify contaminant behavior. Using custom tools, models, and visualizations, I make technical relationships accessible. My expert reviews help strengthen or challenge claims in litigation and regulatory settings.

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TECHNICAL COMMUNICATION AND EDUCATION

Clear communication of complex technical concepts is at the heart of my work. I create impactful technical illustrations and animations that help convey investigation findings and conceptual site models to diverse stakeholders, including legal teams, regulatory agencies, and the public. I also offer technical education and training, including online courses and workshops focused on groundwater contamination, hydrogeology, and data visualization. My goal is to empower professionals with the knowledge and tools needed to understand and manage environmental challenges effectively.

GET STARTED

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WHAT CLIENTS ARE SAYING

EDUCATIONAL VIDEOS

Playlist

11 Videos



Introduction to Groundwater Contami... 2:30



Groundwater Plume Animation - Leaki... 0:55



Migration of PFAS (\"Forever Chemical... 1:16



Groundwater Contamination for Begin... 3:20



Simulation of Groundwater Contamina... 2:29



Groundwater Contamination Plume - S... 1:00



Occurrence and Migration of PFAS F... 44:24

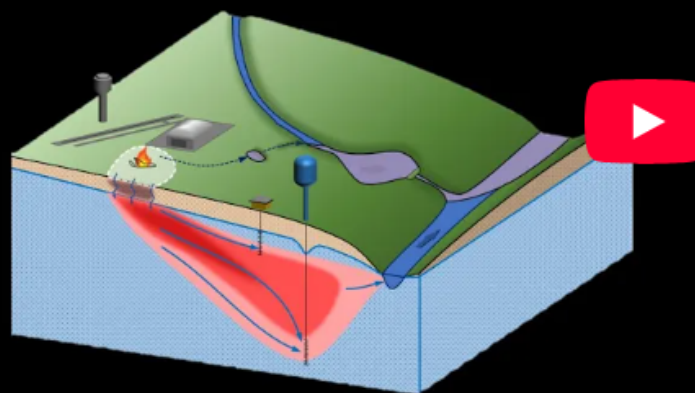


Introduction to Groundwater Contamination by PFAS at Airports and Military Bases

Groundwater Contamination by PFAS Releases at Airports and Military Bases



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GROUNDWATER EDUCATION FOR ALL

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GROUNDWATER INSIGHTS PUBLICATIONS

Conceptual and Visual Understanding of Hydraulic Head and Groundwater Flow (Cohen and Cherry, 2022) simplifies groundwater principles through a visual approach. This internationally recognized resource is available for free download.

Hydrogeologic Characterization of Fractured Rock Formations (Cohen, 1995) provides practical methods for assessing groundwater flow in fractured rock using integrated field techniques.

EPA's Unprecedented Interim Drinking Water Health Advisories for PFOA and PFOS (Cotruvo, Goldhaber, and Cohen, 2023) discusses the scientific basis and socioeconomic implications of EPA's HA levels.