



PROFESSIONAL PROFILE



Nathan A. Epler, PhD, PG, LEP

Principal Hydrogeologist

EXPERIENCE SUMMARY

Over thirty years of experience: Hydrogeologist at Roux; Hydrogeologist at United States Geological Survey.

TECHNICAL SPECIALTIES

Quantitative Hydrogeology/Geochemistry/Design of groundwater remedial systems/Environmental Forensics/Environmental Project Management/Expert Witness/Litigation Support. Project Manager for remedial investigations, feasibility studies, and remedial actions. Re-development of Brownfield, Superfund, petroleum releases, and MGP Sites. Specialties include groundwater remedial systems design using numerical modeling, geochemistry of groundwater including emerging contaminants, analytical and numerical groundwater flow and contaminant transport modeling for hazardous waste sites, landfills, remedial design, and litigation support.

REPRESENTATIVE PROJECTS

Litigation Support Projects

- Testifying expert defending a large poultry manufacturer against allegations of nitrate contamination in groundwater.
- Directed research into the use of naturally occurring radium isotopes, tritium and radiocarbon to date shallow groundwater for flow model calibration in the Upper Glacial aquifer on Long Island, New York.
- Consulting expert for large industrial Superfund Site on Long Island involving a 16,000-ft long chlorinated solvent groundwater plume potentially affecting public water supplies. Case involves CERCLA cost recovery, Natural Resources Damages assessment, fate and transport evaluations and computer modeling, and development of remedial alternatives.
- Consulting expert for Fortune 500 corporations group related to the Passaic River/Newark Bay Superfund Site.
- Consulting expert reviewing groundwater and surface water models for Newtown Creek Superfund Site.
- Testifying expert for Gowanus Canal Superfund Site small party defendant.
- Expert Witness for water district impacted by a Superfund Site on Long Island, New York. Provided opinions on source and timing of VOC plume and apportionment.
- Consulting Expert to provide opinions on impact of product release at a petroleum terminal relative to existing impacts.
- Consulting Expert to provide opinions on nature and timing of a pipeline release.
- Expert Witness for former service station owners in Westchester, NY defending against claim of impact to adjacent private properties. Demonstrated that additional third-party defendants were equally responsible for impact.
- Gross v. Pall Corporation. Expert Witness for Long Island industrial site. Successfully defended third party against claim that they contributed to offsite contamination of a public supply well. Case settled prior to trial.

CONTACT INFORMATION

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EDUCATION

PhD in Geochemistry and Environmental Modeling, State University of New York at Stony Brook, 1991

MS in Geology, State University of New York at Stony Brook, 1986

BS in Geology, Queens College, City University of New York, 1983

PROFESSIONAL LICENSES

Professional Geologist, New York State, 2017.

Licensed Environmental Professional in the State of Connecticut, 2011

- Expert Witness for upstate New York industrial site where residents were claiming indoor air impacts due to migration of chlorinated solvents in groundwater along sewer lines. Used historic release data and GIS interpretation of chemical signatures to demonstrate that additional responsible parties likely contributed to contamination, which were not named in the original complaint.
- Expert Witness for an insurance carriers' defense group. Provided expert report concerning the timing of ground-water contamination. Case settled prior to deposition.
- Major et al. and Green et al. v. AstraZeneca Inc., et al. Expert Witness for upstate New York industrial site. Provided litigation support on case involving a former industrial dump site where wastes were burned and whether migration from the site could have impacted surrounding domestic supply wells. Case settled prior to deposition.
- FMC Corporation v. The Vendo Company and Wier Floway, Inc. Consulting Expert for plaintiff. Reviewed groundwater fate and transport model created by defendants. Model was shown to be flawed, inaccurate and invalid according to generally accepted modeling practices. Case settled prior to deposition.
- Consulting expert for New Jersey Industrial Site. Provided litigation support concerning the source, timing and extent of pesticides in soil and groundwater. Reviewed and analyzed consultant's reports, exhibits, and technical data. Client settled case prior to trial. The site has been redeveloped as a campus-type commercial setting with multiple tenants.

Groundwater Flow, Pumping System Design, and Contaminant Transport Projects

- Principal Modeler, groundwater and surface-water flow and contaminant transport at the BROS Superfund Site in New Jersey. Groundwater contaminant fluxes based on a 3D groundwater flow model are used to provide input into a 2D finite element surface-water model of a tidally influenced creek and wetlands system. The combined models are used to study the flux of contaminants through the groundwater/surface-water flow system.
- Principal Modeler, groundwater flow and contaminant transport at a former picture tube manufacturing facility in Taiwan.
- Principal Modeler, groundwater flow and remedial design for a 600-gpm groundwater extraction system to prevent off-site migration of petroleum hydrocarbons from an 850-acre former refinery in Rhode Island.
- Principal Modeler, LNAPL and groundwater flow and transport modeling to support risk assessment and remedial design for an 800,000-gallon LNAPL plume at a former ExxonMobil refinery site in Rhode Island.

- Principal Modeler, surface-water flow, solute and sediment transport in a river adjacent to an 850-acre petroleum terminal. Dissolved phase hydrocarbon fluxes into the river were calculated based on a groundwater flow model. The fluxes were used as input into a 2D finite element river model. The river model was used to predict the maximum downstream transport of dissolved phase and sediment borne contaminants.
- Principal Modeler, LNAPL recovery simulations using finite-element modeling. Recovery simulations were performed to evaluate the feasibility of recovery of a benzene plume at an industrial facility in Brazil. The modeling results indicated that LNAPL recovery alone would be inadequate to remediate the plume. Air sparging and soil vapor extraction were used as remedial alternatives.
- Principal Modeler, groundwater flow and solute transport at an industrial site on Long Island, New York, where groundwater was impacted by hexavalent chromium that threatened public water-supply wells downgradient of the site.
- Principal Modeler, groundwater flow and remedial design at a Superfund site in Delaware impacted by volatile organic compounds. Performed DNAPL investigation. Designed remedial system consisting of 12 interceptor wells.
- Principal Modeler, groundwater flow and remedial design at an ISRA site in New Jersey where groundwater was impacted by pesticides that threatened public water-supply wells downgradient of the site.
- Principal Modeler, groundwater flow at a Superfund site (No. 5 on NPL) in Massachusetts. This project involved modeling to determine the interaction between groundwater and surface water in a stratified drift aquifer.

Investigation and Remediation Projects

- Project Manager of groundwater Remedial Investigation at an ISRA Site in New Jersey. Project included installation of over 120 monitoring wells to delineate off-site plume of chloroform and pesticides in groundwater; design, installation and testing of a 1,500-gallon per minute interceptor/recharge system to capture the plume.
- Project Manager, Site investigation and remediation at a NYS Superfund Site in Glen Cove, New York. Project included performing Remedial Investigation to identify the nature and extent of impacts to soil and groundwater and developing and implementing a remedial action plan.
- Project Manager, Site investigation and remediation at a bulk petroleum storage terminal in New York. Project included soil borings and installation of wells to delineate free-product plume. Successfully negotiated with NYSDEC regarding scope and design of active free-product recovery system.

- Project Manager Remedial Investigation at a New York State Superfund Site. Site was a former dye and pigment manufacturing facility for over 100 years. Extensive soil and groundwater contamination was delineated and remediated under a series of IRMs designed to be coordinated with the future re-development of the Site.
- Project Manager remedial investigation under the New York State Voluntary Cleanup Program of a Closed Industrial Landfill. Site was contaminated with numerous compounds and contained drums and construction debris. Site was evaluated using electromagnetic surveys, trenching and borings. Remedial Action Work Plan included using phyto-technology to address leachate control.
- Project Manager remedial investigation under the New York State Voluntary Cleanup Program of an undeveloped area associated with an industrial parcel, where arsenic-contaminated fill was placed. Successfully demonstrated efficacy of using field-screening techniques for arsenic delineation.
- Project Manager of Site investigation and re-development project for 10 parcels in Manhattan. Sites were impacted by MGP waste and petroleum hydrocarbons. Site remedies included installation of sheet-piling and secant wall containment barriers, and incorporation of vapor barrier and active venting systems into building construction.
- Project Manager of soil Remedial Investigation at an ISRA Site in New Jersey. Project included delineation of pesticides in soil at a 28-acre facility. Higher delineation limits and cleanup levels were successfully negotiated with the NJDEP to reduce the volume of soil to be remediated.
- Project Manager of Remedial Investigation at Delaware City PVC Site. Project includes well installation, water-level measurements and groundwater sampling to determine whether PVC Site could be source of VOCs beneath petroleum refinery.
- Project Manager of Performance Monitoring at the Delaware City PVC Superfund Site. Project includes sampling of over 100 monitoring wells to assess the performance of a 12-well groundwater interceptor and treatment system. Due to large reductions in plume volume, recommendations were accepted by the USEPA to reduce the number of pumping wells and the total pumping rate.
- Project Manager, installation of a 2,000-gallon per minute supply well for a New Jersey utility. Project included startup testing, 72-hour aquifer test and preparation of Water Allocation Permit.
- Project Manager offsite soil gas and groundwater investigation in residential neighborhood adjacent to former dye manufacturing facility.
- Project Manager site investigation at a dry cleaner in Staten Island, New York where both soil and groundwater were impacted by tetrachloroethene. Site is adjacent to church and school, requiring significant community involvement.
- Project Manager in charge of conversion of a parking garage to a Charter School in New York City. Project included a remedial investigation to identify sources of Tetrachloroethene vapors in soil and developing a sub-slab depressurization system to protect future occupants of the School.
- Project Manager for investigation and remediation of a former Auto sales facility in NYC under the NYS Brownfield Cleanup Program. The future use of the Site was as a hotel and conference center. Achieved Track 1 unrestricted use cleanup for the Site.
- Project Manager for the investigation and remediation of a former warehouse in the Bronx, NY that was slated for development into low-income residential housing under the NYS Brownfield Cleanup Program. Achieved Track 1 unrestricted use cleanup for the Site.

PUBLICATIONS

- 2019 Webinar on choosing expert witnesses for environmental cases.
- 2019 Webinar on Radionuclides in the Environmental and Managing Associated Risks.
- 2015 Faculty member for American Law Institute Environmental Litigation Conference, Washington DC.
- 2013 Faculty member for American Law Institute Environmental Litigation Conference, Washington DC.
- 2012 Faculty member for American Law Institute Environmental Litigation Conference, Washington DC.
- 2011 Faculty member for American Law Institute Environmental Litigation Conference, Washington DC.
- 2011 "Environmental Science and General Hydrogeologic Principles for Lawyers," in Environmental Issues in Real Estate Business Transactions, Lawrence Schnapf Editor, Published by American Bar Association.
- 2011 DC Building Industry Association meeting. Vapor Intrusion and Other Environmental Issues During Redevelopment.
- 2011 Guest Lecturer, New York Law School Seminar on hydrogeologic principles, NPL and Superfund processes.
- 2010 Guest Lecturer, New York Law School Seminar on hydrogeologic principles, NPL and Superfund processes.



2009 American Bar Association Dispute Resolution Section Annual Conference, in New York. Served on panel discussion.

2009 Guest Lecturer, Columbia Law School. Seminar for second year law class on interpretation of environmental data.

Epler, N. et al., 2005, Use of Graphics in Environmental Litigation Support. Manuscript and presentation at National Ground Water Association Environmental Law Conference, Baltimore, MD.

Epler, N. et al., 1993, Retardation of 238U and 232Th decay chain radionuclides in Long Island and Connecticut aquifers. *Geochemica et Cosmochimica Acta*, v 57, 597-603.

Epler, N, 1991, A Multiple Tracer Study of Ground Water From A Shallow, Unconfined Aquifer, Long Island, New York, Ph.D. Dissertation, State University of New York at Stony Brook, 156pp. The research included contaminant transport modeling and groundwater dating.

Epler, N, 1990 Dating Shallow Ground Water Using Naturally-Occurring Radionuclides, *Groundwater*, V28.